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- Certified Tech Numbers
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# EVENTS CALENDAR

## Industry Trade Shows

**POWER-GEN Europe 2010**
*June 8-10, 2010; Amsterdam, The Netherlands*
Europe's leading exhibition and conference for the power generation, transmission and distribution and water industries. To exhibit, contact Gilbert Weir at *gilbertw@pennwell.com*

**POWER-GEN Middle East 2010**
*October 4-6, 2010; Doha, Qatar*
The region's leading exhibition and conference for the power generation, transmission and distribution and water industries. To exhibit, contact Denne Johnson at *dennej@pennwell.com*

**POWER-GEN International 2010**
*December 14-16, 2010; Orlando, FL*
The world's largest show for power generation, featuring the EGSA On-Site Power Pavilion. For exhibit information, contact EGSA at (561) 750-5575, ext. 205 or e-mail Jalane Kellough at *J.Kellough@EGSA.org.*

## Conferences

**EGSA 2010 Fall Technical & Marketing Conference**
*September 12-14, 2010; Newport Beach, CA*
Speakers will cover business and technical aspects of On-Site Power Generation and current industry trends. Registration information will be available online at *www.EGSA.org* or call (561) 750-5575.

**GIE+EXPO 2010**
*October 28-30, 2010; Louisville, KY*
Showcasing outdoor power equipment distributed through dealers, retailers and distributors for consumer, professional and rental use. For information, visit *www.gie-expo.com.*

## EGSA On-Site Power Generation Schools

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**Basic Schools**

Baltimore, MD ..... June 8-10, 2010
Orlando, FL* ..... December 14-16, 2010
**To be held concurrently with POWER-GEN International*

**Advanced Schools**

San Antonio, TX ..... August 9-12, 2010

## Seminars

**Introduction to Power Generation, Control, and Power Management**
*June 15, 2010; Hilton Houston Hobby Airport Hotel, Houston, TX*
The principles of distributed power generation, synchronization, load sharing, power management and system protection. Hosted by Woodward Governor Company. Instructor: David Cutro, Application Engineer, Woodward Electrical Power Systems business segment. Detailed seminar outlines and registration information available at *www.woodward.com/houston_seminar.htm*

**Steam Turbine, Gas Turbine and Compressor Basics**
*June 16, 2010; Hilton Houston Hobby Airport Hotel, Houston, TX*
The fundamentals, applications, control and protection of steam and gas turbines and compressors and a discussion on American Petroleum Institute Standard 612. Hosted by Woodward Governor Company. Instructor: Rich Kamphaus, Turbomachinery Controls Product Line Manager, Woodward Turbine Systems business segment. Detailed seminar outlines and registration information available at *www.woodward.com/houston_seminar.htm*

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# Looking Back at the Spring Convention

I hope you were fortunate enough to have attended the Spring EGSA Convention. If you did, I think you will agree that it was a great Convention with strong, informative presentations and dynamic, well attended committee meetings.

I made a point of moving around and experiencing each of the different committee meetings to see if EGSA Leadership could provide anything to enhance the committees' quality and efficacy. I left with the impression that, based on all of the new ideas coming from these committee meetings, the next few years are going to be very exciting for this organization. Believe or not, even with the current economy, 233 participants attended the Spring Convention. What's more, the EGSA membership grew from 700 at the last Fall Conference to 745 at this Spring Convention.

Do you recall my January/February column earlier this year where I talked about updating your company's Strategic Plan in preparation for the economic recovery and identifying new services or products your company could provide to your customers? The Spring Convention's education sessions offered many golden nuggets of information that you could take advantage and implement or investigate further. Have you struggled in the past advancing your business models and expanding your business? If yes, then try implementing the suggestions of keynote speaker Bodine Balasco: identify your goals, break each goal up into manageable tasks, and then set objectives and dates for each task. Next, diligently manage your business to complete these tasks, and I think you will be pleasantly rewarded for your efforts.

Are you like many business leaders wondering when the economic recovery will start and where the economic recovery will occur? The presentation *"A View From Washington To Wall Street And Back Again…"* by Walter S. Howe provided a few clues regarding what happened to capital spending in 2009 and what the volume of spending will be in the future based on the energy portions of the Reinvestment Act. Can your business take advantage of this government Stimulus Spending? Are you positioned to do so?

There was an excellent presentation on using customer-installed generation to meet utility grid capacity titled *"Demand Response–Leveraging Your Customer-Side Generating Assets."* If you are a Dealer/Distributor then this may be an excellent opportunity for introducing some of your customers to this revenue generating opportunity with EnerNOC. Not only does such a move allow you to bring value to your customer if they decide to sign up for the program, it creates demand for your services since their equipment will require additional maintenance to ensure peak performance in order to meet the demands of the contract.

There were many different presentations that delivered a variety of important facts and information to attendees, including presentations that were unique to the various committees. Unfortunately, if you were not in attendance, you missed each dynamic presenter's delivery and the spirited discussions afterwards. Fortunately, most of the presentations can be downloaded from the EGSA website by accessing the members-only portion of the website. Don't miss another dynamic presentation or committee meeting; capture the full value of your membership and plan on participating in the Fall Conference September 12-14, in Newport Beach, CA. ■

*George Rowley*
*EGSA Director*
*of Education*
*G.Rowley@EGSA.org*

# Up to Twelve $2,500 Coren Scholarships to Be Awarded

The EGSA Board of Directors has authorized the award of up to twelve $2,500 scholarships for the 2010-11 academic year. The merit-based, competitive scholarships are awarded to individuals who plan to seek employment in the On-Site Power generation industry after they complete their studies. The deadline for applications is May 1; scholarship recipients should be identified before the end of June.

Composition of the Scholarship Committee is proscribed by its standard operating policies and procedures; committee membership was recently reconstituted. The committee members are: Chairperson Warner Bauer (Vaporphase Division of Kickham Boiler & Engineering, Inc.); John Hoeft (Marketing & Technology Insights, Inc.); John Kelly (Kelly Generator & Equipment, Inc.); Gary Kidwell (ASCO Power Technologies, L.P.); and Walter Petty (Atlantic Power Solutions, Inc.).

## Certification Update

As of March 31, 28 techs have passed the test so far this year for a total of 353 Certified Technicians. The pace of testing seems to be picking up in comparison to last year when 80 techs passed the test in the entire year. If the current rate continues, we could expect 112 techs to pass the test this year. The overall pass rate for the test is 81%.

EGSA Marketing Manager Todd Cline has been very busy working with the Certification Committee to identify key strategies for a much-enhanced and more assertive certification marketing program that targets end-users. We thank Todd for his creative efforts and excellent ideas.

## Education Committee Update

**Strategic Planning** – The Education Committee will conduct a teleconference at 4PM Eastern Time on May 5th so that members can contribute ideas and suggestions for "Initiatives" for the corporate Strategic Plan. Anyone that has an interest in possible Education Committee contributions is invited to participate. Please contact George Rowley for more information and call-in instructions.

**On-line Learning** – Through its On-Line Learning subcommittee, the Education Committee has begun the process of developing a potential plan for EGSA on-line learning programs. Bill Heacock, our education consultant, addressed the concept of on-line learning during the committee meeting at the Spring Convention and provided all present with an excellent A to Z overview of the many possibilities and variations.

If you have suggestions for or questions about EGSA education programs, please contact George Rowley via an e-mail to *G.Rowley@EGSA.org* or by phone at 561-237-5557. ■

## Focus on Your Individual Learning Needs

Our two-tiered school enables you to choose which education experience is most appropriate for you and get the most out of your training dollar. Use the guidelines below to choose which school you should attend.

## Basic School

The Basic School is a general—but still technical—overview of On-Site Power Generation equipment. The Basic School is designed for those who are working in non-technical positions (such as Sales or Marketing, Administrative, or Company Management positions) and for those with less than three years experience working in the industry.

Each registrant will receive handout materials and instruction, a copy of EGSA's *On-Site Power Generation: A Reference Book*, and lunch on each of the three days.

**2010 Basic School Schedule**

- Baltimore, MD – June 8-10, 2010
- Orlando, FL – December 14-16*

**To be held concurrently with POWER-GEN International 2010*

## Advanced School

In comparison to the Basic School, the Advanced School will offer more highly technical and in-depth coverage of the system equipment. The Advanced School is designed for those who have attended the EGSA Basic On-Site Power Generation School; those who are employed in Engineering, Project Management, or Service positions; and for those with over three years working in the industry.

Each registrant will receive handout materials and instruction, a copy of EGSA's *On-Site Power Generation: A Reference Book*, and lunch on each of the four days.

**2010 Advanced School Schedule**

- San Antonio, TX – August 9-12, 2010

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# 2010 EGSA On-Site POWER GENERATION Schools

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# Updates on UL2201, NFPA99 ISO and EGSA Codes Committee

*Herb Whittall*
*EGSA Technical Advisor*
*HWhittall@comcast.net*

UL 2201, *Standard for RV/Portable Engine-Generator Assemblies*, met in March to discuss several subjects, the most contentious of which was the requirement for ground fault circuit interrupters (GFCI's) on all outlets. This had been the subject of much previous discussion but had been added because the *National Electric Code* NFPA 70 had included the requirement. However, in the Panel 13 meeting of NEC 70 in December, 2009, that requirement was removed.

An exception in the Muffler After Fire Test was removed at the March 2-3 STP meeting. The exception had read: "When the engine is not capable of backfiring with the above method, a backfire condition may be simulated by injecting an air/fuel mixture into the exhaust system until it is completely filled and energizing the spark plug installed in the exhaust manifold."

On January 25, 2010 the U.S. Environmental Protection Agency (EPA) announced a new national air quality standard for NO2. The new standard does not change the previous Annual Average Standard of 52 parts per billion (ppb) formed from vehicle, power plant or other industrial emissions. However, it does impose a one hour national standard of 100 ppb. The EPA will install at least 40 monitoring stations near communities with elevated NO2 by January, 2012. Once three years of monitoring data are available, the EPA will re-designate non-complying areas. According to the agency, "This new one-hour standard will protect millions of Americans from peak short term exposures, which primarily occur near major roads."

Recent voting on ISO/NP 15619 – *Reciprocating Internal Combustion Engines – Measurement Procedure for Exhaust Silencers* has approved efforts to proceed with writing a new standard. The USA (ANSI) voted to abstain but had the following comment: "Engine Manufacturers Association members were polled in the U.S. and there was no interest shown in undertaking this New Work Item. Technically, the US vote would have been NO but the statement in item 1 made it difficult to check the "NO" box. Therefore the box indicating 'Have no interest' has been checked."

Since EGSA had attempted to write such a standard in the past, I voted as EGSA's representative to SAE for the ISO to write it at no cost to our members.

EGSA has received notice from the ISO that the following standards have been updated and are available: ISO 7967:2010 *Reciprocating Internal Combustion Engines – Vocabulary of Components and Systems – Part 5: Cooling Systems* and *Part 9: Control and Monitoring Systems*.

## EGSA Codes Committee Meeting

The recent EGSA Codes and Standards Surveillance Committee meeting—held during the EGSA Spring Convention in St. Petersburg, FL—was well attended and featured some interesting discussions:

- EGSA Code Representative Herb Daugherty gave an update on the extraordinary NFPA 99 meeting (the 2010 edition of NFPA 99 was expected to be balloted and approved at the last NFPA Annual meeting but was sent back to committee for further modification instead).
- We discussed recent efforts to get UL 2201 approved despite the requirement for GFCI outlets on all portable generator sets.
- We discussed the EPA's new National Air Quality Standard for nitrogen dioxide (NO2).

Committee Chair John Hawkins also gave a very interesting interactive presentation concerning "Sound and Noise." For example, did you know that the sound power level for shouting is 1000 times greater than the level for a conversation? For more information, contact John Hawkins at *Hawkinsj1@asme.org*.

Finally, the committee voted to recommend that the Board of Directors renew EGSA's membership with the International Code Council (ICC). ■

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# Exercising "Power in Control"

## DEIF, Inc. Shares its Vision to Set the Global Standard for Control and Instrumentation Solutions

*By Don Ferreira, Editor*

*All DEIF products are tested in Denmark as part of DEIF's quality management system, which is certified in accordance with ISO 9001.*

It's a familiar business model (long established, well respected industry leader decides to expand and opens overseas branch) but with a slightly different twist. It's a common occurrence in Japan, China and even Germany but Denmark just doesn't immediately come to mind when you mentally list the usual countries of origin for fledgling, "foreign" business ventures. And yet, that slight twist may be the secret to DEIF, Inc.'s success. Launched in 2007, the company is the U.S. subsidiary of DEIF A/S, a privately held company based in Denmark that has been family owned since it was established in 1933. Over the past 77 years, DEIF has developed into an international company with locations in Denmark, Germany, Norway, Great Britain, France, China, the United States, Brazil and India.

DEIF manufactures controls and instrumentation specifically for the distributed generation industry. "Our customer base includes OEM's, distributors, dealers, and users of gensets," says Steve Evans, CEO and General Manager of DEIF, Inc. "Our products are sold directly to the end-user through our subsidiaries, like DEIF Inc. in North America, or via an extensive distributor network. We act globally and develop, sell and provide product service for our customers all over the world. Our worldwide service concept ensures correct installation and stable operation."

DEIF's vision is to set the global standard for control and instrumentation solutions that can secure efficient, safe and environment-friendly power production and marine transportation.

"We call it 'Power in Control,'" says Evans. "DEIF's mission," he adds, "is to enhance the competitive advantage of our customers. To do this, we must identify their needs and wants in detail; develop high-quality products; be logistically efficient; and offer unsurpassed technical service and support."

DEIF's "Power in Control" business philosophy comes from the company's owner, Toke Foss: "We develop, manufacture, test and globally sell and service our products ourselves, and therefore we have full control of all product processes. We take pride in cooperating with our customers to deliver the necessary solutions—solutions you can rely on even under the harshest weather conditions. That is the very meaning of 'Power in Control;' it characterizes everything we do."

DEIF began making calibration-grade high quality instrumentation in 1933. Following WWII, Denmark shifted to a marine-based economy and DEIF responded by moving into marine bridge instrumentation. In the 1960's, DEIF had the first transistorized transducer and soon entered the Marine Power Generation market. "We moved into land-based power generation soon after," says Evans, "and it has grown to become the largest segment of our business."

Today, DEIF offers several product lines to service both markets, including Engine and Genset Controls, Switchboard Instrumentation, Marine Bridge Instrumentation, and Renewable Energy Controls; most manufacturing and all R&D are done in Denmark. The addition of 9 overseas subsidiaries and strategic partners in 19 countries, however, has become a crucial business strategy. In fact, says Evans, "Foreign markets are vital to our success. We could not survive without them."

According to Phil Fulkrod, one of DEIF Inc's Regional Sales Managers, DEIF's success in part also comes from the company's strong belief in building long-term business relationships based on respect and mutual trust coupled with the knowledge that the customer's trust is something that must be earned. He points to a previously published overview of the company and notes that DEIF takes full responsibility for the quality of their solutions and for making sure that each and every customer experiences smooth implementation and operation, including subsequent service and support. In other words, DEIF can take full responsibility for product quality because it has the means necessary within the organization to ensure it.

As an example, Fulkrod points to the extensive hardware and software testing performed on DEIF's new AGC 200 controller. DEIF's history in designing highly robust marine products to meet tough, marine market standards was a guiding influence in the hardware design.

"The AGC 200 hardware underwent HALT (highly accelerated life testing) during its development," explains Fulkrod. "The idea was to expose the controller to increasingly harsher conditions, driving it to the breaking point and then improving those points of the design."

Testing included 20 G vibration with a temperature change from -40 to 100 degrees celsius (C) at a rate of 80 degrees C change per minute. It also included a 5 to 45 G vibration sweep at 25 degrees C. In addition, the hardware produced during the development and the first production series were subjected to temperature changes (-25 degrees C to +70 degrees C) all while running in a simulation environment. The units were tested in simulator stands for over six months and have also been tested in DEIF's engine lab.

"DEIF has worked with a few select customers to establish a beta testing program in India, Czech Republic and Norway," adds Fulkrod. "And even though the software platform was derived from our AGC-3 controller, which is sold in the thousands, it also underwent significant testing. There were two complete testing cycles by the R&D team lasting several weeks. In parallel with this testing, the DEIF Support Engineering team put the software through its paces looking for those ever elusive bugs which included support from teams in Germany, France, and Spain."

## DEIF, Inc. Factoids

- Fort Collins, CO Headquarters with own product development and factory in Denmark.
- More than 380 employees worldwide.
- About 20% of the employees are degreed engineers.
- In-factory test facilities to certify products for UL, CE, Lloyds, BV, and many other classification agencies.
- Multiple Classification approvals of nearly all products.
- ISO 9001:2008 certified since 1995.
- Company-owned Subsidiaries in the U.S., Germany, Norway, Great Britain, France, China, Brazil and India.
- Established network of distributors in 19 countries.
- EGSA Member since 1998.

*A birdseye view of DEIF Inc.'s facility in Fort Collins, CO.*

Here in the U.S., DEIF Inc. personnel have become familiar faces at EGSA Conferences thanks to the company's consistent participation and visible presence in the Manufacturers Showcase. Parent company DEIF A/S joined EGSA in 1998. After its launch in 2007, DEIF, Inc. took over the membership, according to Evans, "to promote this industry, learn new trends and network with friends, both old and new."

"DEIF employees have attended every EGSA Convention and Conference since fall 2006 when I started the process of opening the U.S. subsidiary," says Evans. "It was the best investment we could possibly make—there is no other way to learn this much, see this many customers, discover new customers, learn this much about the DG industry and have a little fun all for the money invested. Best bang for the buck!"

Evans invests a lot of his own time to become personally involved and active in EGSA. "I really enjoy talking and learning about power generation," he explains. "I have been involved with electrical power since 1980 and truly enjoy learning something new every day. Distributed Power Generation is not being taught well in our schools, so we all need to do our part to promote this industry and prepare the next generation to take over when we are ready to go fishin' full time!"

Since it was launched, DEIF, Inc. has managed to flourish—even during the recent recession—perhaps in part because its parent company is able to look at the U.S. economy from the outside. "DEIF opened its U.S. operation in 2007, so we were just gaining traction when the recession hit," relates Evans. "Management decided to sell our way out of this recession instead of cost-cutting our way out of it. Technological innovation, an unwavering dedication to quality and a return to the basic honesty and integrity that made this country strong in the first place—embracing these values has enabled DEIF to actually grow during these tumultuous times. We hired Dave Stringer last fall, a familiar name and face to many EGSA old timers."

Technological innovation, notes Evans, is a crucial ingredient to company success in this industry. "Power Generation is a very old business that still uses the same basics that founded this industry. EGSA helps us discover what is important to our customers so we can apply our R&D efforts and produce technological innovations to give our customers the edge they need to be successful."

Now that the economy has begun to shake off the recession and move forward, Evans maintains a "cautiously optimistic" outlook. "The DG business has not suffered the severe economic conditions that have plagued some markets, but certainly we are not immune. Businesses need the credit and the confidence to pull out of this recession. Government spending is not the long term answer, sustainable growth will come from businesses investing in the future, creating jobs and producing their products."

"2009 sales were up 30% over 2008," he adds. "We're optimistic that 2010 will be a record year for our U.S. operations. We have continued to expand in this recession, hiring talented people and positioning ourselves to be ready for the future. In fact, we have an opening now for a technical person—know anybody?" asks Evans. *(Editor's note: see the DEIF ad in this issue's Job Bank.)*

Part of this strategy involves DEIF's environmentally minded practices and "green" technology solutions. "We conduct business with a constant eye on the environment, not only in our paperless order handling process, reduced travel, and environmentally sensitive packaging and manufacturing, but also in our designs," says Evans. "We are constantly looking for ways to help our customers squeeze every possible bit of energy out of their gensets. For example, we offer control systems with features that have proven to reduce plant emissions by several percentage points. We've also moved into new markets with our Renewable Energy division. It's mostly focused on Wind Turbine control, but we also offer hydro, co-gen, CHP, and

*Continued on page 16*

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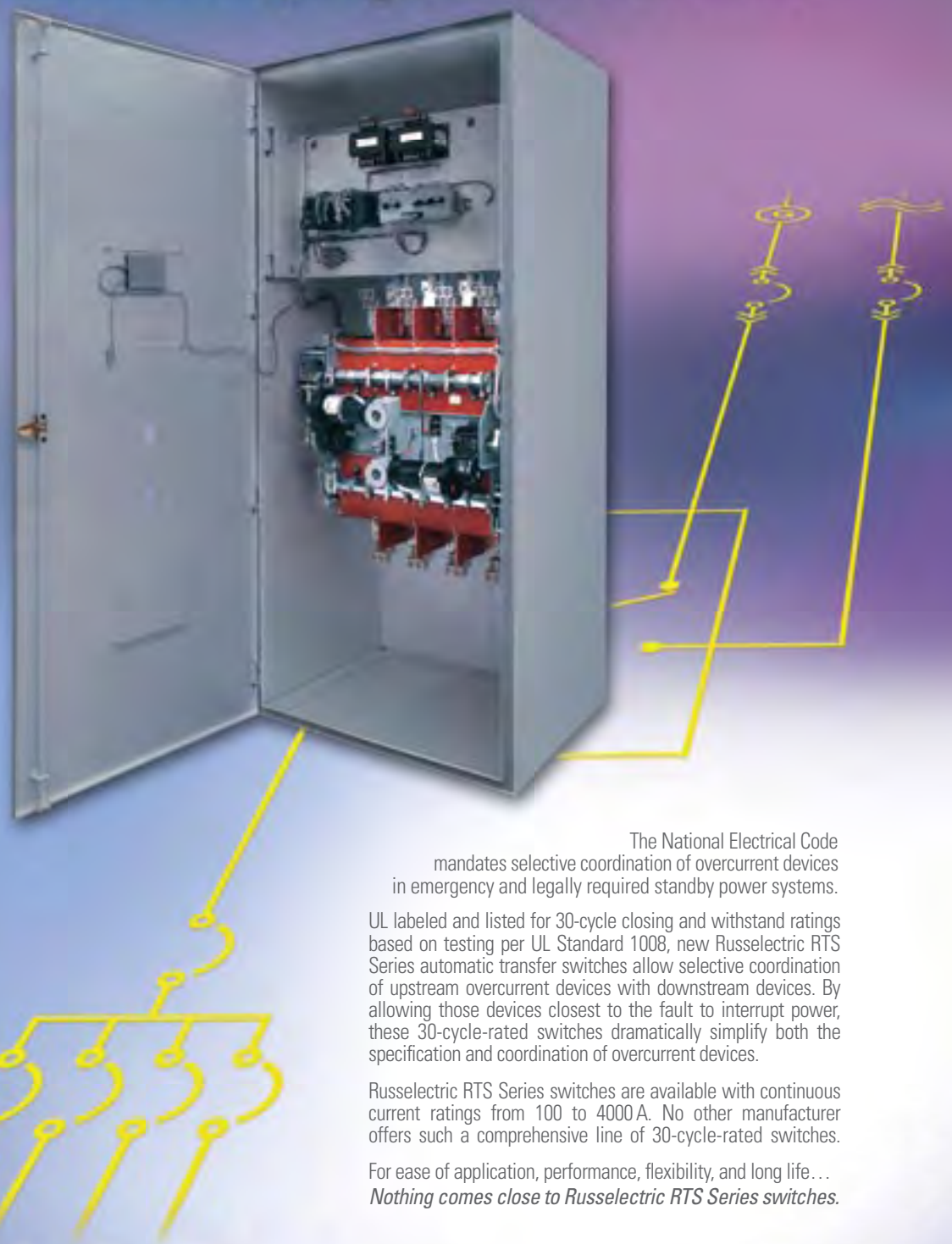

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## DEIF History Timeline

*1933 DEIF A/S founded in Copenhagen*

*1972 DEIF factory relocated to Skive*

*1977 Engine and Gen-set Controls become a business area*

*1980 DEIF Norway becomes a 100% owned subsidiary*

*1982 The first integrated generator control and protection system Delomatic is released*

*1983 Founder Erling Foss dies; Toke Foss takes over ownership of DEIF A/S*

*1987 Toke Foss is named Managing Director of DEIF A/S*

*1989 DEIF A/S offices relocated to Skive*

*1990 Malling Kontrol Acquisition; Instrumentation becomes a business area*

*1993 Introduction of Delomatic 3*

*1994 Quality control system certified according to ISO-9001:2000*

*1995 DEIF Skive facility expansion*

*1997 New ERP system (Baan) and Uni-line introduced*

*Continued on page 18*

other green energy solutions. Plus, we're investigating the controls required for post-combustion treatment systems for Tier 4 engines."

Like many other companies, DEIF is always ready to explore and exploit the next big market opportunity. In fact, the company has already made its move in that direction. "We started our office in India within the past year or so and that is really taking off," says Evans. "We expanded our China office dramatically due to the pressures of that market. We also see DG opportunities in the 'Next 11' countries, including Mexico, and have started to focus on them, too. I hope EGSA expands to other parts of North America and the world. "

Other potential areas for market growth include "Energy storage, smart grid interfaces, and paralleling existing gensets with the utility for fast dispatch." says Evans. "Wind power will certainly change power generation, but it cannot be stored. Gas turbines take 15 minutes or so to fire off. This leaves 'the first 15' minutes as the critical obstacle that must be overcome with smart grid technology to reduce the demand immediately and start DG in 10 seconds."

Other indicators give Evans an optimistic view for DEIF and the future of the On-Site Power industry. Even the NIMBY (Not In My Backyard) phenomenon gives him reason to believe the industry is headed for an upswing.

"Nobody wants a power plant near them," says Evans. "so On-Site Power will become Distributed and Embedded Power Generation with units down to 100kW being remotely dispatched to cover 'the first 15' and other times of high demand." In the future, he adds, "I think we will see innovation in solar and wind power that, combined with reduced energy consumption and distributed generation, will make the average house 'grid free.'"

## A DEIF History Lesson

The early history of DEIF A/S is most closely associated with Erling Foss, the son of Alexander Foss, one of Denmark's most important industrialists. Erling was heavily influenced by his father's entrepreneurial spirit, but he wasn't particularly interested in technology. Instead, Erling was driven to

*Continued on page 18*


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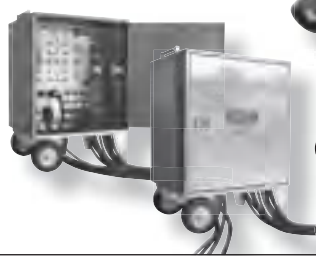

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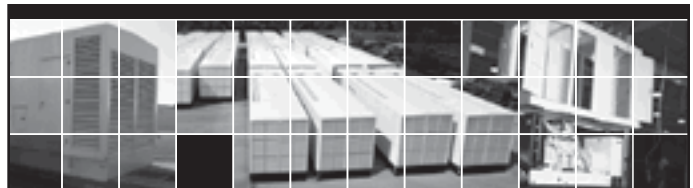

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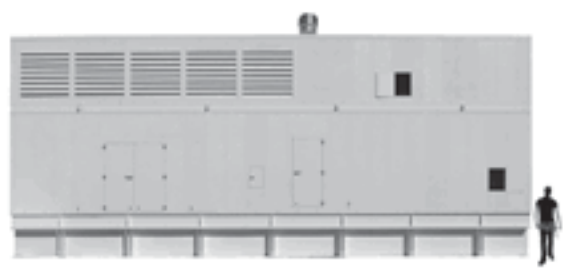

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*Continued from page 16*

*2000 DEIF UK and DEIF GmbH established; Multi-line 2 introduced*

*2001 DEIF Electrical (Shanghai) Co. Ltd. and France sales office established*

*2004 DEIF recertified to ISO 9001:2000; Acquisition of West Control; Renewable Energy Controls become a business area*

*2005 Introduction of XL Indicators based on a new patented technology*

*2006 DEIF do Brazil established; DEIF takes full ownership of DEIF Electrical (Shanghai) Co. Ltd. subsidiary; First installation of complete solutions for wind power and hydro power plant*

*2007 DEIF A/S completes 3,600 m² expansion of head office and new 1,000 m² test center; U.S. subsidiary DEIF, Inc. established; DEIF recertified to ISO 9001:2000*

*2008 DEIF celebrates 75th anniversary; DEIF India subsidiary established*

*2009 New test center opened; DEIF Wind Power Technology division established*

*2010 DEIF recertified to ISO 9001:2008*

use technology to create value. Following a brief career in FLSmidth A/S (a leading supplier of cement and mineral industries equipment), he felt more suited to a life of self-employment and began to look for opportunities.

As luck would have it, Erling was contacted by Richard Dahl and Alex Juel-Hyllested, both of whom had a professional background from the company Helweg Mikkelsen, a leader in the market for electronic measuring instruments. The pair wanted to set up their own company and produce basic measuring instruments such as ammeters and voltmeters for use in power plants, factories and hospitals. Their business idea was sound; they just had no funds to back it. Erling Foss believed in their project, decided to invest in it and on June 1st, 1933, the three men founded DEIF (Danish Electro Instrument Factory).

In the beginning, the company's main activity consisted of assembling basic electromagnetic measuring instruments with a focus on precision and robust equipment. Over 75 years later, some things have changed and some things have not. The company is still held by the Foss family and is owned and managed by Erling's son, Toke Foss. Product development and manufacturing are still located in Denmark, but DEIF now sells and services its products worldwide. The company's product lines have kept pace with the industry and evolved through technological innovation to become the Engine and Gen-Set Controls, Switchboard Instrumentation, Bridge Instrumentation, and Renewable Energy Controls DEIF makes today. However, one thing hasn't changed, says Steve Evans, CEO/General Manger of DEIF, Inc. "The company's focus on quality, reliability and service remains the same."

Erling Foss managed the company for nearly 50 years. At his passing in 1982, his youngest son, Toke Foss, took ownership of DEIF and eventually took over as managing director. With a bold business sense that belied his liberal arts education (a degree in forestry and a diploma in business administration), Toke launched a large-scale effort to rebuild, recreate and expand the company that culminated in 1990 with the acquisition of Malling Kontrol.

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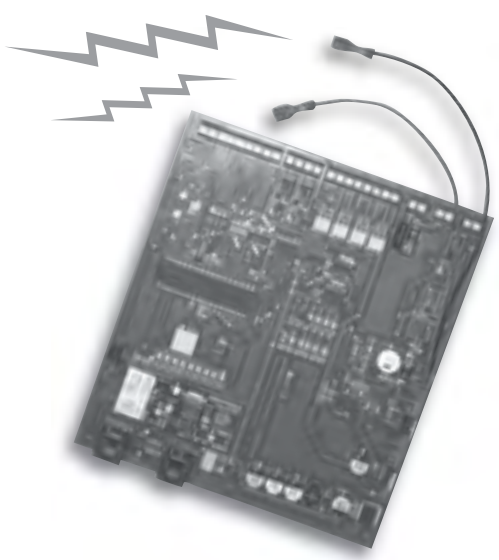

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Exterior of the DEIF A/S plant in Skive, Denmark.

bridge products and components, Malling Kontrol was a good fit and an ideal candidate for acquisition. The takeover created an opportunity for DEIF to assemble a strong marine business product portfolio that utilized the strengths of previous generations of DEIF control systems. The acquisition also gave DEIF access to new marine market customers it would not otherwise have had, including Malling Kontrol's biggest customer, A.P. Møller-Mærsk—the largest container ship and supply vessel operator in the world. The takeover's most important benefit of all, however, was the large infusion of revenue as it took control of Malling Kontrol's earnings.

In an age when it is key to know tomorrow's technology before anyone else does, DEIF has used its decades of accumulated experience to great advantage, including the company's transformation in the 1990's which left it a more modern business with a more sophisticated understanding of sales, marketing and customer service.

"Today, knowledge of our products in their context with an understanding of their possibilities provides us with a crucial competitive advantage," says the company's website, "Low-price production alone no longer cuts it."

For example, developing gen-set controls helped further transform DEIF. The products' highly complex technological design required developers with expert backgrounds. As a result, DEIF is now a global knowledge-based company as well as one of the world's biggest manufacturers of gen-set controls.

Despite these continuing transformations, DEIF hasn't lost touch with its roots as an instruments manufacturer. While the company has moved on from its early days, it still sells the most basic analog instruments from 1933 with only slight design modifications. What's more, DEIF still relies heavily on its senior employees' experience and knowledge.

The latest innovation in illuminated bridge instrumentation is a case in point. The use of X-coil instruments on a ship's bridge dates back to the beginning of the 20th Century. One might consider such mature technology to be long outdated. Yet because senior employees possessed the product knowledge and understood the product's possibilities, they were able to add a microprocessor and manufacture a more precise and stable instrument.

"In that way, DEIF comes full circle," says Evans. "When the first workshop was set up in 1933, each employee was at the center of DEIF. Today, our employees are still central to our success." ■

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# Global Warming, Greenhouse Gases and Legislation vs. Regulation

*By Martin E. Morrill, General Manager, Süd-Chemie Inc.*

What causes global warming? Scientists have spent decades trying to determine the cause of climate change and how the Earth's natural cycles and events influence climate. What is clear is that the amount and pattern of warming that's been measured can't be explained by natural factors alone. It has become clear that when discussing global warming, it is imperative to include the effect of greenhouse gases (GHGs) emitted by humans.

There are many opinions and organizations that have their own bias to bring to the discussion of Global Warming, and we won't try to bring all of these together for this review.

One of the more respected organizations that has done a great deal of analysis and report writing is the International Panel on Climate Change, or IPCC. Formed by the United Nations, the IPCC meets every few years to review the latest scientific findings and write a report summarizing all that is known about global warming. Each report represents a consensus, or agreement, among hundreds of leading scientists.

One of the first things scientists learned is that there are several greenhouse gases (GHG) responsible for warming, and humans are the cause of many of them. Most come from the combustion of fossil fuels in vehicles, factories and electricity production. The gas responsible for the most warming is carbon dioxide, also called CO2. Other contributors include methane released from landfills and agriculture (especially from the digestive systems of grazing animals), nitrous oxide from fertilizers, gases used for refrigeration and industrial processes, and the loss of forests that would otherwise store CO2.

Different greenhouse gases have very different heat-trapping abilities. Some of them can even trap more heat than CO2. A molecule of methane produces more than 20 times the warming of a molecule of CO2. Nitrous oxide is 300 times more powerful than CO2. Other gases, such as chlorofluorocarbons (which have been banned in much of the world because they also degrade the ozone layer), have heat-trapping potential thousands of times greater than CO2. But because their concentrations are much lower than CO2, none of these gases adds as much warmth to the atmosphere as CO2.

In order to understand the effects of all the gases together, scientists tend to talk about all greenhouse gases in terms of the equivalent amount of CO2. Since 1990, yearly emissions have gone up by about 6 billion metric tons of "carbon dioxide

### Table Showing CO2 Equivalents – $CO_2^e$

| Greenhouse Gas | Formula | 100-year GWP (SAR) | 100-year GWP (AR4) |
|---|---|---|---|
| Carbon dioxide | $CO_2$ | 1 | 1 |
| Methane | $CH_4$ | 21 | 25 |
| Nitrous oxide | $N_2O$ | 310 | 298 |
| Sulphur hexafluoride | $SF_6$ | 23,900 | 22,800 |
| **Hydrofluorocarbons (HFCs)** | | | |
| HFC-23 | $CHF_3$ | 11,700 | 14,800 |
| HFC-32 | $CH_2F_2$ | 650 | 675 |
| **Perfluorocarbons (PFCs)** | | | |
| Perfluoromethane | $CF_4$ | 6,500 | 7,390 |
| Perfluoroethane | $C_2F_6$ | 9,200 | 12,200 |
| Perfluoropropane | $C_3F_8$ | 7,000 | 8,830 |
| Perfluorobutane | $C_4F_{10}$ | 7,000 | 8,860 |
| Perfluorocyclobutane | $c\text{-}C_4F_8$ | 8,700 | 10,300 |
| Perfluoropentane | $C_5F_{12}$ | 7,500 | 13,300 |
| Perfluorohexane | $C_6F_{14}$ | 7,400 | 9,300 |

equivalent" worldwide, more than a 20% increase.

## The Science of Global Warming

Glaciers are melting, sea levels are rising, rain forests are declining; it's becoming clear that humans have caused most of the past century's warming by releasing heat-trapping gases as we power our modern lives. GHG levels are higher now than in the last 650,000 years.

The "greenhouse effect" is the warming that occurs when certain gases in Earth's atmosphere trap heat. These gases let in light but keep heat from escaping, like the glass walls of a greenhouse.

First, sunlight shines onto the Earth's surface, where it is absorbed and then radiates back into the atmosphere as heat. In the atmosphere, "greenhouse" gases trap some of this heat, and the rest escapes into space. As more greenhouse gases are in trapped the atmosphere, more heat gets trapped as well.

Levels of greenhouse gases have gone up and down over the Earth's history, but they have been fairly constant for the past few thousand years. Global average temperatures have stayed fairly constant over that time as well, until recently. Through the burning of fossil fuels and other GHG emissions, humans are enhancing the greenhouse effect and warming Earth.

Scientists often use the term "climate change" instead of global warming. This is because as the Earth's average temperature climbs, wind and ocean currents move heat around the globe in ways that can cool some areas, warm others, and change the amount of rain and snow falling. As a result, the climate changes differently in different areas.

The rapid rise in greenhouse gases is a problem because it is changing the climate faster than some living things may be able to adapt. Also, a new and more unpredictable climate poses unique challenges to all life.

Historically, Earth's climate has regularly shifted back and forth between temperatures like those we see today and temperatures cold enough that large sheets of ice covered much of North America and Europe. The difference between average global temperatures today and during those ice ages is only about 5 degrees Celsius (9 degrees Fahrenheit), and these swings happen slowly, over hundreds of thousands of years.

Now, with concentrations of greenhouse gases rising, Earth's remaining ice sheets (such as Greenland and Antarctica) are starting to melt too. The extra water could potentially raise sea levels significantly.

As the earth's temperature rises, the climate can change in unexpected ways. In addition to sea levels rising, weather can become more extreme. This means more intense major storms, more rain followed by longer and drier droughts (a challenge for growing crops), changes in the ranges in which plants and animals can live, and loss of water supplies that have historically come from glaciers.

Scientists are already seeing some of these changes occurring more quickly

than they had expected. According to the Intergovernmental Panel on Climate Change, eleven of the twelve hottest years since thermometer readings became available occurred between 1995 and 2006.

## The Effects of Global Warming

The heat is not only melting glaciers and sea ice; it's also shifting precipitation patterns and setting animals on the move.

Some impacts from increasing temperatures are already happening.

- Ice is melting worldwide, especially at the Earth's poles. This includes mountain glaciers, ice sheets covering West Antarctica and Greenland, and Arctic sea ice.
- Researcher Bill Fraser has tracked the decline of the Adélie penguins on Antarctica, where their numbers have fallen from 32,000 breeding pairs to 11,000 in 30 years.
- Sea level rise became faster over the last century.
- Some butterflies, foxes, and alpine plants have moved farther north or to higher, cooler areas.
- Precipitation (rain and snowfall) has increased across the globe, on average.
- Spruce bark beetles have boomed in Alaska thanks to 20 years of warm summers. The insects have chewed up 4 million acres of spruce trees.

Other effects could happen later this century, if warming continues.

- Sea levels are expected to rise between 7 and 23 inches (18 and 59 centimeters) by the end of the century, and continued melting at the poles could add between 4 and 8 inches (10 to 20 centimeters).
- Hurricanes and other storms are likely to become stronger.
- Species that depend on one another may become out of sync. For example, plants could bloom earlier than their pollinating insects become active.
- Floods and droughts will become more common. Rainfall in Ethiopia, where droughts are already common, could decline by 10 percent over the next 50 years.
- Less fresh water will be available. If the Quelccaya ice cap in Peru continues to melt at its current rate, it will be gone by 2100, leaving thousands of people who rely on it for drinking water and electricity without a source of either.
- Some diseases will spread, such as malaria carried by mosquitoes.
- Ecosystems will change—some species will move farther north or become more successful; others won't be able to move and could become extinct. Wildlife research scientist Martyn Obbard has found that since the mid-1980s, with less ice on which to live and fish for food, polar bears have gotten considerably skinnier. Polar bear biologist Ian Stirling has found a similar pattern in Hudson Bay. He fears that if sea ice disappears, the polar bears will as well.

(Source – IPCC)

## Legislation vs Regulation

As the public debate concerning Global Warming and what to do about it continues Worldwide, the United States is cur-

*Continued on page 26*

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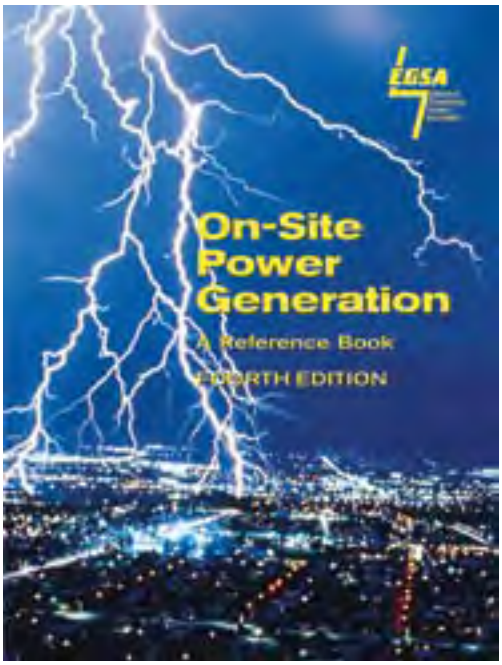


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## EGSA Names 2010 Timmler, Carpenter Award Recipients

The Electrical Generating Systems Association (EGSA) has announced that Joe Hafich and Bob Hafich, both of Emergency Systems Service Co., have been presented with two of the Association's most prestigious awards at the 2010 Annual Spring Convention. The Awards were given in recognition for the Hafich brothers' outstanding contributions to EGSA and the On-Site Power Industry at large.

2010 EGSA President Ron Hartzel presented Joe Hafich with the annual William Timmler Award in recognition of his long, outstanding work as Chairman of the Distributor/Dealer Committee. The Timmler was first given in 1970 and was later renamed in honor of William Timmler, Jr. following his death from cancer in the late 1970s.

"William (Bill) Timmler was V.P. of Marketing for Lima Electric Co. of Lima, OH, which was a subsidiary of Condec Corp. of Greenwich, CT," said Hartzel. "Bill was very active in EGSA. He sat on the Marketing Committee, chaired the Activities Committee, served as a Director and then served in every office, including President from 1976 to 1977."

"Joe Hafich has spent the better part of his life as a part of EGSA thanks to his family-owned company's longtime membership in the Association," noted Hartzel. "Joe is also a tireless promoter of EGSA, its services and its benefits. He has spent most of the past decade chairing the Distributor/Dealer Committee and he has served on the Board of Directors not once but twice."

President Hartzel presented Bob Hafich with the Leroy H. Carpenter Award, which is given annually to an individual EGSA member for long and outstanding service to the Association. It was first presented in 1972 and was later named in honor of Leroy H. (Roy) Carpenter after his untimely death.

"Leroy Carpenter was the Quality & Electrical Test Manager for Fermont Corp. of Bridgeport, CT," said Hartzel. "Like William Timmler, he was very active in EGSA. He chaired the Convention Planning Committee, served as Vice Chair of the Government Liaison Committee and sat on the Military Standards Sub-Committee."

"Bob Hafich also has a long history of active service within EGSA. In addition to serving on a number of committees over the years, he has chaired several others—including the Nominating, Membership and Generator Technician Certification Committees—and he has served as a Director on the EGSA Board."

See the article in this issue of *Powerline* for more about the 45th Annual Spring Convention. For more information about EGSA and its Awards Programs, visit *www.EGSA.org* or call 561/750-5575.

*2010 EGSA President Ron Hartzel presented Joe Hafich with the William Timmler Award in recognition of his long, outstanding work as Chairman of the Distributor/Dealer Committee.*

*President Hartzel presented Bob Hafich with the Leroy H. Carpenter Award, which is given annually to an individual EGSA member for long and outstanding service to the Association.*

## EGSA Honors Greg Linton for Service as 2009 President

The current and Immediate Past Presidents of the Electrical Generating Systems Association (EGSA) were recognized for their contributions to the Association recently in what has become a traditional exchange of awards and a literal passing of the gavel. The exchange took place at the recent EGSA Annual Spring Convention in Saint Petersburg, FL.

2009 EGSA President Greg Linton, JRS Custom Fabrication, presented Ron Hartzel of Eaton Corporation with the traditional gavel plaque to commemorate Mr. Hartzel's investiture as 2010 EGSA President.

President Hartzel, in turn, presented Mr. Linton with a plaque recognizing "his dedication and service to the Association as EGSA President in 2009" and a portrait—a charcoal sketch of Greg Linton and his wife, Stacy. The portrait has become an EGSA tradition and is given to the outgoing President every year.

See the article in this issue of *Powerline* for more about the 45th Annual Spring Convention. For more information about EGSA and its Awards Programs, visit *www.EGSA.org* or call 561/750-5575.

*Top photo: Greg Linton (left) presents the gavel. Bottom photo: EGSA President Ron Hartzel (right) presents Linton's plaque.*

## EGSA Certified Technician Counts

As of March 31, 2010, EGSA Certified Technicians may be found in U.S. states, territories, Canada and Trinidad as follows:

| # | State, Territory or Country |
|---|---|
| 27 | GA |
| 26 | OH |
| 24 | VA |
| 21 | CA, MI |
| 20 | FL |
| 18 | CT, Ont. Canada |
| 16 | TX |
| 15 | IL |
| 14 | AZ, PA |
| 13 | NC |
| 12 | NY |
| 10 | MO |
| 8 | NJ, Trinidad |
| 7 | MA, MD |
| 6 | SC |
| 5 | WV |
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| 3 | TN, WA |
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# EGSA NEWS

## EGSA Takes New Shape as it Implements Strategic Long Range Plan

EGSA is a stronger organization with a brighter future thanks to the latest Strategic Long Range Plan and new policies and procedures that help identify future Association leaders. Board Members are increasing their efforts to familiarize themselves and build relationships with the more active EGSA members such as regular conference attendees, committee leaders and committee meeting attendees. Plus, with the support and assistance of EGSA staff, member volunteers and a handful of ad hoc committees, the Board is overhauling Association policies and procedures to address a variety of issues. For example, there was little room within the leadership structure for up and coming, active members to learn how EGSA operates. Today, term limits for Committee leaders provide new members with more "entry-level" leadership opportunities.

New policies have created a database of these active leaders to track their volunteer experience and help EGSA determine who is qualified to move up within the organization and when. In the past, much of the information used to evaluate possible Board Member nominees came from those EGSA Members who personally knew the candidate. Today, such personal information is still used to "round out" a candidate's profile, but its importance is far outweighed by such factors as participation in EGSA events and activities. EGSA participation, in fact, is closely scrutinized in order to establish each individual EGSA member's experience level and readiness to assume responsibility in the organization.

Each potential opportunity for advancement within EGSA requires candidates to meet or exceed certain criteria before they can be considered for that office. Criteria may range from conference attendance all the way up to significant accomplishments that are recognized by the Association and the industry at large, such as authoring a chapter within EGSA's *"On-Site Power: A Reference Book."* As the offices move up in rank, the criteria are increased to ensure that only the most qualified and capable individuals are considered to fill vacancies.

*Continued on page 39*

## EGSA On-Site Power School Instructors Recognized With Service Awards

Several members of the Electrical Generating Systems Association (EGSA) were singled out at the recent EGSA Annual Spring Convention in Saint Petersburg, FL and recognized for their years of service as EGSA On-Site Power School Instructors. The Convention was held March 14-16 with over 200 On-Site Power professionals in attendance.

2010 EGSA President Ron Hartzel of Eaton Corporation presented service awards to a select group of On-Site Power School Instructors whose hard work and commitment over the years have served to educate On-Site Power industry professionals.

The awards are bestowed through EGSA's Instructor Appreciation Program, which recognizes the contributions of those instructors-and their employers-who have taught in the school for at least five years.

Todd Lathrop of Eaton Corporation and Leo LeBlanc of Methane Power Inc. both received awards for five years of service as instructors. Herb Daugherty, formerly of ASCO Power Technologies, was recognized for his 25 years of service as an EGSA On-Site Power School instructor.

Instructor Bill Day, who could not attend the event, was also recognized for five years of service.

### Photo Captions

*Top left: Herb Daugherty, 25 years.*
*Far left, bottom: Todd Lathrop, Eaton Corporation, five years.*
*Left: Leo LeBlanc, Methane Power Inc., five years*

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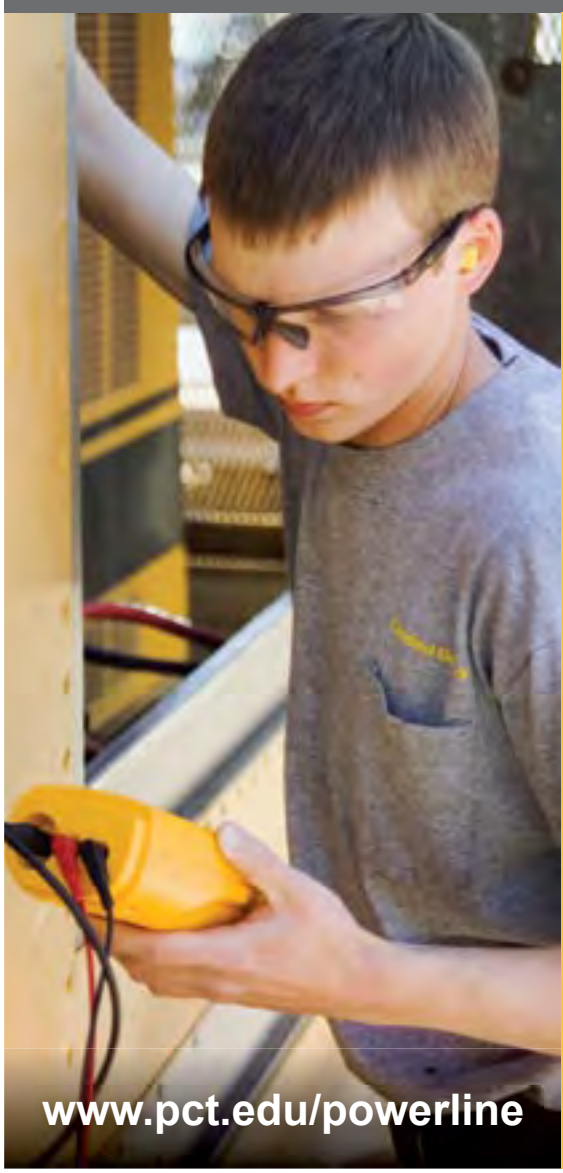

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Penn College® students earned four of the 12 scholarships awarded by EGSA's David I. Coren Scholarship Progam in 2009-10.

www.pct.edu/powerline

*Continued from page 22*

rently in between deciding on attacking the problem via Regulation (a rule passed by a government agency, in this case it would be the EPA) or via Legislation (a law enacted by Congress, for example the Clean Air Act of 1970).

To date, the US Federal government has used voluntary and incentive-based programs to reduce emissions and has established programs to promote climate technology and science. The EPA has played a significant role in helping the Federal government reduce greenhouse gas emissions and greenhouse gas intensity. The EPA has many current and near-term initiatives that encourage voluntary reductions from a variety of stakeholders. Initiatives, such as ENERGY STAR, Climate Leaders, and Methane Voluntary Programs, encourage emission reductions from large corporations, consumers, industrial and commercial buildings, and many major industrial sectors.

## What is the EPA's Position Regarding GHG Permitting?

It has become clear that the EPA would rather have Congress enact legislation than to have to tackle the Global Warming Problem and regulate CO2 emissions on their own, with a smaller staff due to cutbacks and a massive Environmental agenda.

As a "bridge" to legislation, the EPA has proposed that regardless of which bill currently being discussed in Congress ends up being enacted as legislation, the prerequisites for any such regulation will be baseline reporting from existing, major sources.

In February, 2010, EPA Administrator Lisa P. Jackson announced the EPA's approach to permitting for GHG emitted from Stationary Sources. Administrator Jackson outlined her decisions for 2010-2011, notably:

- No facility will be required to address greenhouse gas emissions in Clean Air Act permitting of new construction or modifications before 2011.
- For the first half of 2011, only facilities that already must apply for Clean Air Act permits as a result of their non-greenhouse gas emissions will need to address their greenhouse gas emissions in their permit applications.
- The EPA is also considering a modi-

fication to the rule announced in September, 2009 requiring large facilities emitting more than 25,000 tons of greenhouse gases a year to obtain permits demonstrating they are using the best practices and technologies to minimize GHG emissions. The EPA is considering raising that threshold substantially to reflect input provided during the public comment process.

- The EPA does not intend to subject smaller facilities to Clean Air Act permitting for greenhouse gas emissions any sooner than 2016.

*(Editor's note: For more information visit http://epa.gov/oar/pdfs/LPJ_letter.pdf)*

## Legislative Approaches

Cap-and-Trade Systems have quickly surfaced as the focus of climate policy discussions across the country. President Obama has made it clear that establishing a bold cap-and-trade program is a priority for his administration. The House of Representatives recently passed the American Clean Energy and Security Act H.R. 2454 (Waxman-Markey), and the Kerry-Boxer Clean Energy Jobs and American Power Act was recently introduced in the Senate.

The goal of the cap-and-trade program is to steadily reduce carbon dioxide and other greenhouse gas emissions economy-wide in a cost-effective manner.

Every large-scale emitter, or company, will have a limit (A "CAP") on the amount of greenhouse gas that it can emit. Each company will need to have an "emissions permit" for every ton of carbon dioxide it releases into the atmosphere. The permits will set an enforceable limit, the "CAP", on the amount of greenhouse gas pollution that the company is allowed to emit. Over time, the limits will become stricter, allowing less and less pollution, until the ultimate reduction goal is met. This is similar to the cap-and-trade program enacted by the Clean Air Act of 1990, which reduced the sulfur emissions that cause acid rain. The SO2 cap-and-trade program is viewed as being very successful and surprisingly, it met the goals at a much lower cost than industry or government predicted.

As with SO2 emissions, it will be cheaper or easier for some companies than others to reduce their emissions of CO2 or other GHG's below their required limit. Some companies will adopt strategies to allow themselves to emit less than their allowance, and they will be able to sell their extra permits to companies that are not able to make reductions as easily. This creates a system that guarantees a set level of overall reductions, while rewarding the most efficient companies and ensuring that the cap can be met at the lowest possible cost to the economy.

Additionally, if the federal government auctions the emissions permits to the companies that are required to reduce their emissions, it would create a large and dependable revenue stream.

The ultimate goal reported by many sources is to limit the rise in global temperature to approximately 2.0 degrees Celsius (3.6 degrees Fahrenheit) above pre-industrial levels by 2050 by reducing carbon dioxide and other emissions from companies as part of a larger plan for curbing global warming.

In order to achieve this goal, any legislation will need to steadily tighten the cap until emissions are reduced to 80 percent below 1990 levels by 2050. Businesses would have to obtain permits entitling

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them to emit a certain quantity of carbon dioxide or its equivalent in other greenhouse gases. All permits would be auctioned off by the government. Emissions permits in the near term would likely fall in the range of $10 to $15 per metric ton of carbon dioxide or its equivalent.

Some companies will be unable to meet their emissions quotas; however, they would be able to purchase allowances from other companies that have acquired more permits than they need to account for their emissions. The cost of buying and selling these emission credits would be determined by the marketplace, which over time would reduce the cost of trading the credits as trading becomes more widespread and efficient.

## Proposed Legislation: Waxman-Markey (House) Bill

The Cap-and-Trade strategy is not the only methodology being suggested and proposed by both branches of Congress.

The Waxman – Markey bill was passed by the House's Energy and Commerce Committee in May of 2009. Formerly known as the American Clean Energy and Security Act of 2009, the basics of the more than 1200 page bill are as follows:

- **Renewable Electricity Standard**–Utilities must generate 6% of their electricity via renewable energy by 2012 and 20% by 2020. Up to 5% can come from energy efficiency programs.
- **Emission Cuts**–Part of the cap-and-trade, it would set goals for reductions over a period of time.
- **Emissions Permitting**–Regulated industries would need to acquire permits, sometimes referred to as "Carbon Credits". Up to 85% of the initial permits will be free at the start of the program and 15% via auction.
- A permit to emit one ton of CO2 is expected to initially be worth around $11 to $15, so the sale of permits will lead to an extensive revenue stream.
- Estimates of the sale of permits are up to $60 Billion initially in 2012 and as high as $115 Billion in 2024.
- The revenue will be put back into energy intensive industries such as steel, iron, paper and cement, coal generators, oil refineries, and electricity producing utilities.
- Any new Coal Plants would be expected to adopt Carbon Capture and Sequestration technology when it becomes commercially available, and capture up to 50% of their CO2 emissions by 2025.
- Significant energy efficiency programs including home consumers and utilities.
- Worker transition programs for workers displaced due to tighter regulations
- Monies for smart cars and smart grid programs.

## The Kerry-Boxer (Senate) Bill

The goal of the Kerry-Boxer bill is "to create clean energy jobs, promote energy independence, reduce global warming pollution, and transition to a clean energy economy." The core of the bill creates a "Pollution Reduction and Investment" program aimed at setting up an economy-wide, market-based program for reducing greenhouse gas emissions (GHGs). Businesses covered by this program would be required to hold enough GHG emission allowances to match their emissions. The

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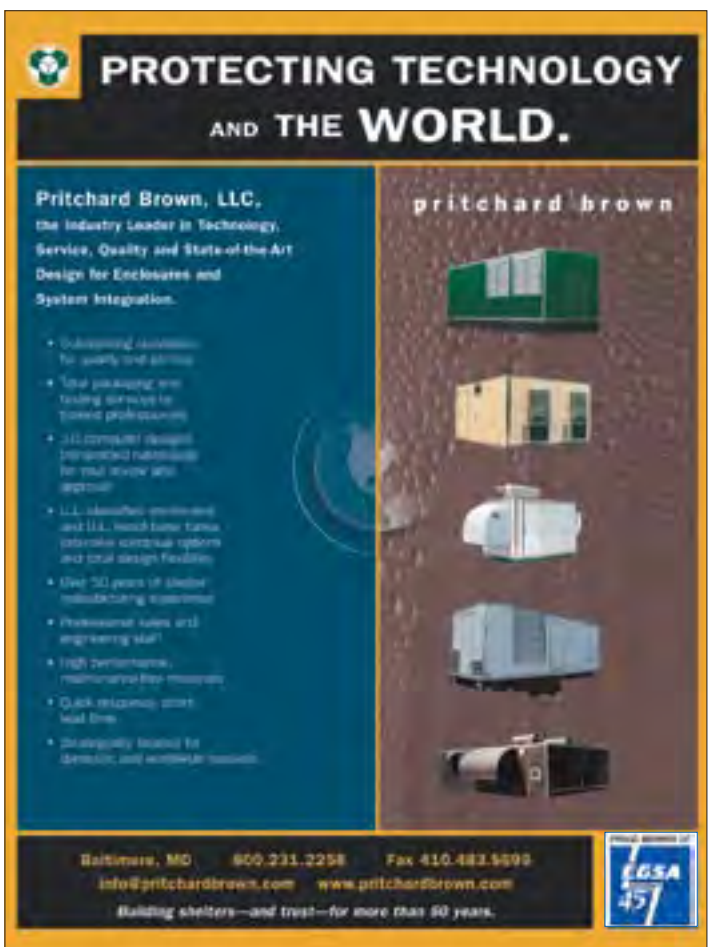
bill also contains complementary measures including: targeted emission standards; support for research, development and deployment of low carbon energy alternatives; and expanded programs to increase energy and water efficiency. Finally, the bill includes provisions intended to ease the transition to a clean energy economy by protecting consumers, workers, and energy-intensive industries from the impact of higher energy costs.

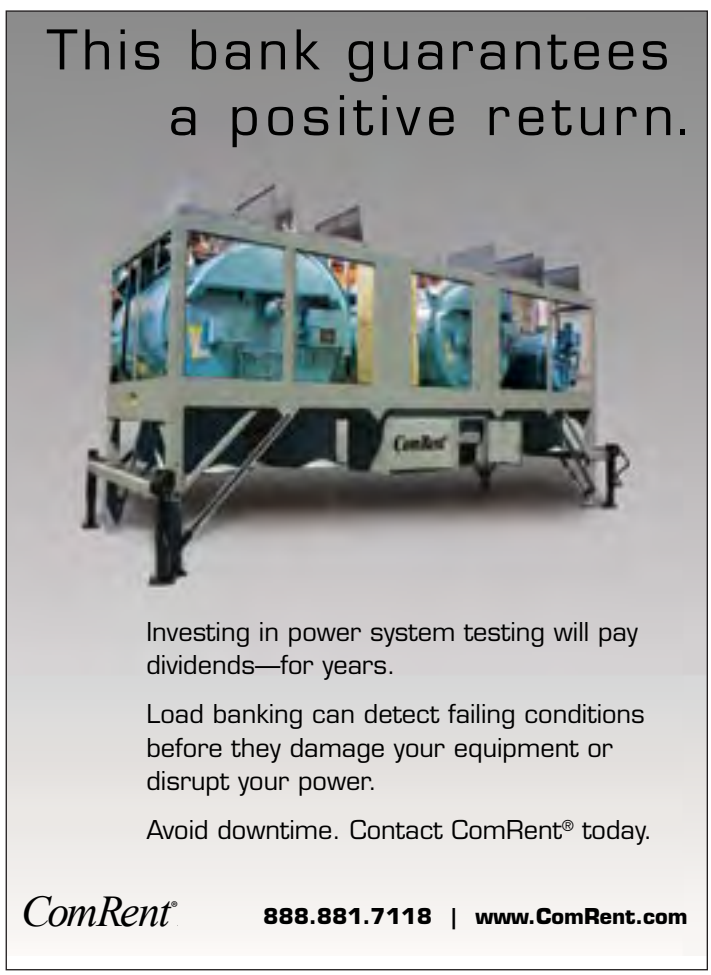
- The Kerry-Boxer bill covers the same seven GHGs identified in the House bill: carbon dioxide, methane, nitrous oxide, hydrofluorocarbons, perfluorocarbons, sulfur hexafluoride, and nitrogen trifluoride.
- Entities covered by the bill include large stationary sources emitting greater than 25,000 tons per year of GHGs, producers and importers of petroleum fuels, distributors of natural gas, producers of hydrofluorocarbon gases, and other specified large sources.
- Approximately 85 percent of national greenhouse gas emissions are covered under the cap. Hydrofluorocarbons are covered by a separate cap and perfluorocarbons may also be regulated separately based on a future decision delegated to the EPA.
- The bill also calls for a decision by the EPA on whether additional domestic regulations on black carbon are warranted.
- Deployment of carbon capture and storage technology through a ten-year program funded through wire charges, bonus allowances for early deployment projects, and allowance value designated through 2050 for further deployment.
- Expansion of nuclear technology by establishing research and development programs for waste management and to safeguard aging existing power plants, and a program to train workers in the nuclear industry.
- Expansion of advanced natural gas, including the use of carbon capture and storage and incentives for lower emitting electricity generation.
- And expanded funding for programs for state energy efficiency initiatives, and building code and retrofit programs.

In addition, the bill requires performance standards for newly constructed coal-fired power plants to require carbon capture and storage technologies once the technology has been adequately demonstrated. It also requires GHG standards for heavy duty and other vehicles and engines to complement the recent EPA proposal for greater fuel efficiency from light duty vehicles. The bill includes a 6-year moratorium (2012 through 2017) on states imposing their own GHG cap-and-trade programs. ■

## About the Author

Martin Morrill is the General Manager of the Süd-Chemie Inc. catalyst manufacturing facility in Needham, MA.

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# On-Site Power Professionals Mark 45th EGSA Annual Spring Convention

On-Site Power Industry professionals flocked to the historic Renaissance Vinoy Resort & Golf Club in Saint Petersburg, FL last month to attend the 2010 Annual Electrical Generating Systems Association (EGSA) Spring Convention. The convention's educational program— with its "Focus on Recovery" theme—covered a variety of subjects in an effort to help attendees educate and prepare themselves for emerging business opportunities. Topics ranged from the economy to shifting client/vendor relationships and from EPA regulations to Tier 4i engine design.

Bodine Balasco of Speak, Inc. gave the Opening Keynote address and set the tone for the convention with his presentation *"Recovery: Positive Changes in the Workplace and the Economy."* Thanks to a Fortune 100 client list that includes AT&T, Boeing, Coca-Cola, British Petroleum, Verizon and FedEx, Balasco was able to share his insider's perspective on business conditions with attendees and offer a penetrating look at how our current economic condition has impacted workplaces and workers across the country.

Featured speaker Ron Autrey, President and COO of Miller Electric Company, took attendees on a tour of his company's recent history as he related how he re-engineered 75-year-old Miller Electric Company in his presentation *"Organizational Development and Market Diversity."*

Autry related how the company's modest success was fast being overshadowed by a 1950s organizational model and an IBM-style corporate culture that stifled employee performance and creativity.

"After 30 years of successful, profitable business. No one wanted to change. Except me," said Autrey.

In 2003, said Autrey, "I got the job as president and literally overnight I contacted my new executive team and explained what we were about to do. They were wide-eyed but they were ready, and they embraced it."

Autrey discussed how he introduced his long-prepared plans to his staff and

*Continued on page 32*

## Monday Educational Session Speakers

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## Tuesday Educational Session Speakers

*Continued from page 30*

explained how company leaders can bring about significant change using the strength of the human resources in their organizations.

In just a few short years, said Autrey, "Fifty managers grew to 100; 650 other employees grew to 1700 with nine offices in seven states. The company's net worth grew from $16 million to $38 million."

Autry closed his presentation by touching on the value of corporate retreats to Miller Electric and how the exercises his managers participate in there translate to the workplace.

"On our last Corporate Retreat, I asked the Division Vice Presidents to tell me what their division would look like if they had to cut 30% from their operating expense budget."

The exercise, added Autrey, required each Vice President to hand pick which employees he would keep on board, thus identifying the most valuable people on their team.

Next, each Vice President gave a presentation on what his division would look like if he could expand anywhere in the country and pursue every opportunity that he wanted. They were also asked to provide a plan for supporting 20-40% growth and were told they could rob employees from other divisions to implement, again serving to identify the company's most important team members.

"Our ultimate mission was to streamline the company and identify who should craft and execute the next expansion for our company," said Autrey. All in all, he added, the entire exercise "prepared us to weather the economic storm that we all experienced last year."

In *"The End-User Perspective: Automated Print Production for the 21st Century,"* speaker Shawn M. Delemeester, Production Director for Valpak Direct Marketing Systems Inc., described his company's project to replace two outdated manufacturing plants with a single, fully automated facility that now serves as a showcase of how U.S. manufacturing plants can cut their energy costs and operate in a green, responsible manner. Delemeester outlined the company's efforts to utilize state-of-the-art energy efficient systems, equipment and construction materials while complying with Florida's stringent building code and wind resistance requirements.

*2010 EGSA President Ron Hartzel, Eaton Corporation, opened the 45th Annual Spring Convention with a few prepared remarks.*

Other sessions included:

- *"The Future Power Generation Market Outlook: The View from Washington and Wall Street"* where speaker Walter S. Howes, Managing Partner, Verdigris Capital touched on a range of issues affecting the energy and generation markets and identified the conditions and drivers that shape our industry's financial health.
- *"The Path to Tier 4 Interim 2011"* where Todd Howe, Global Product Marketing Mgr., Doosan Infracore Portable Power, gave attendees a primer on the Tier 4 technology movement, highlighted the new operational considerations for dealers, fleet operators, and end-users and suggested how the industry can work together for a successful transition to these greener products.
- *"Leveraging On-Site Power Generation as a Demand Response Resource"* where Mark Foreman, Director of Operations Support, EnerNOC, Inc. shared how end-users and project developers can easily leverage their on-site power generation capacity as a valuable demand response resource and generate additional revenue for themselves plus how Distributor/Dealers can create demand for their services by introducing clients to EnerNOC's program and thus create a need for increased maintenance in order to ensure peak performance and satisfy contract obligations.

### Strong Focus on Networking

Throughout the course of the Convention, attendees had ample opportunity to network with the On-Site Power Industry's key players in a variety of settings, such as the Distributor/Dealer and President's Receptions and the Spring Golf and Fishing Tournaments. Attendees also exercised their opportunity to shape the future of the Association and the On-Site Power Industry by participating in EGSA Committee meetings.

Many of the Committee meetings featured guest speakers and presentations on topics tailored to the individual Committee's purpose and mission. In the Codes & Standards Surveillance Committee meeting, for example, John Hawkins, Jr., GTE Industries, gave a presentation on sound and noise that discussed how they affect control and how we respond to them. Using handheld sound level meters, Hawkins generated noise at various levels and frequencies to give participants an idea as to what different frequency ranges sound like

*Continued on page 36*

*Left photo: 2009 EGSA President Greg Linton (left), Diane Brown and EGSA Director David Brown at the First-Timers Reception.*

*Middle photo: New EGSA Member Jim Crowley, Robert Tongue and EGSA Director Brad Fennell at the President's Reception.*

*Right photo: 2010 EGSA President Ron Hartzel presented EGSA Membership Committee Chairman Bob Hafich of Emergency Systems Service Co. with the Leroy H. Carpenter Award for long and outstanding service to the Association.*

*Left photo: EGSA Members mingle with first-time attendees at the First-Timers/New Members Reception.*

*Middle photo: (From left) Mark McNeely, Jim Davies, Joe Hafich, John Kelly, Jr. and Randy Weimer each received 100 EGSA Bucks for sponsoring a new EGSA Member.*

*Right photo: (From left) Don Blackman, Ron Schroeder, Gary Kidwell and Armand Visioli of ASCO Power Technologies tied for second place in the Spring Golf Tournament.*

*Far left photo: Several spouses and guests enjoy breakfast on one of the Resort's many terraces.*

*Middle photo: Mary Frances "Cookie" Mack, 2003 EGSA President Leo LeBlanc, Mary Kacvinsky, 2005 EGSA President Ray Kacvinsky and EGSA President-Elect John Kelly, Jr. at the Board Reception.*

*Right photo: This year's sold out Spring Manufacturers Showcase allowed attendees to network in a traditional exhibition setting.*

# Investing in New Technology Through Diesel Retrofitting

## How Diesel Retrofitting is Bringing Economic Benefits and Cleaner Air to Diesel Generator Owners

*By Dawn Fenton, Diesel Technology Forum*

Thanks to cleaner fuels and advancements in diesel engine combustion and new emissions controls, diesel engines of all kinds, including stationary power generators, have grown dramatically cleaner over the last several years as virtually emissions free "Tier 4 emissions level" engines enter the marketplace during this decade. In March, the EPA took further action to reduce diesel emissions in the power generation sector for existing engines with the promulgation of its final rule on National Emission Standards for Hazardous Air Pollutants for Reciprocating Internal Combustion Engines (NESHAP for RICE).

This regulation sets emissions standards for existing stationary non-emergency engines at both area and major emissions sources and although some may be met through management practices, many will also need to install emissions control equipment that would limit CO emissions by up to 70 percent. To date, diesel retrofit projects have been focused primarily on the on-road sector and construction equipment, however, as these fleets become cleaner, attention is moving to other sectors where older technology still exists as a contributing emissions source, even if used only infrequently.

Fortunately federal and state funds exist to help diesel owners retrofit their vehicles and equipment on a voluntary basis in advance of any mandates. To date, these sources have been largely untapped by the power generation sector, but these new regulations and the growing interest in making the most of existing power capacity through demand response programs could spark new interest in these funds from this sector.

*Delaware's Fort Delaware State Park used diesel retrofit funds provided by the American Recovery and Reinvestment Act (ARRA) to acquire a new diesel microturbine, which will result in an annual savings of several thousand dollars.*

### Why Retrofit?

Most people equate diesel retrofitting with the application of a filter or emissions control device on the engine exhaust stream. While one of the more popular forms of retrofitting, it can also include actions such as refueling with cleaner fuel, rebuilding engines to a higher tier level, repowering by replacing an entire engine, or even replacing the entire piece of equipment with today's technology. Determining which type of retrofit strategy to employ depends on a number of factors such as the engine age, duty cycle and the availability of verified technology options.

Until recently, the market for retrofitting stationary diesel generators has been relatively small, due in part to the lack of any mandates or economic incentives for doing so; however in both cases, times are changing.

From a regulatory standpoint, the U.S. Environmental Protection Agency's final NESHAP for RICE rule requires existing stationary compression ignition reciprocating internal combustion engines meeting specific siting, age and size criteria to attain designated CO emissions levels by 2013 either through management practices or retrofits (see table on page 35 or visit *www.Epa.gov* for specific details). As a result, many diesel generator owners across the country, like on-road and construction fleet managers in California, will find themselves in a position of needing to undertake some type of retrofit to meet government mandated emissions levels on their existing equipment.

Diesel generator owners may also wish to voluntarily retrofit their equipment. In some cases, owners are driven by their interest in demand response programs,

| Type of Air Toxic Emissions Source | Date of Construction or Reconstruction | Engine Use | Engine Size | Emission Standard |
|---|---|---|---|---|
| Area | Prior to 6/06 | Emergency | All Engines | Defined management practices |
| Area | Prior to 6/06 | Non-emergency | ≦300HP | Defined management practices |
| Area | Prior to 6/06 | Non-emergency | 300<HP≦500HP | 49ppmvdCO at 15% $O_2$ or 70% CO reduction |
| Area | Prior to 6/06 | Non-emergency | >500 HP | 23 ppmvd CO at 15% $O_2$ or 70% CO reduction |
| Major | ≦500HP prior to 6/06 | Emergency | 100≦HP≦500 | Defined work practices |
| Major | ≦ 500HP prior to 6/06 | Non-emergency | <100HP | Defined work practices |
| Major | ≦ 500HP prior to 6/06 | Non-emergency | 100≦HP≦300 | 230 ppmvd CO at 15%$O_2$ |
| Major | ≦ 500HP prior to 6/06 | Non-emergency | 300<HP≦500 | 49 ppmvd CO at 15% O2 or 70% CO reduction |
| Major | >500 HP prior 12/02 | Non-emergency | >500HP | 23 ppmvd CO at 15% $O_2$ or 70% CO reduction |

*A summary of EPA's final rule for National Emission Standards for Hazardous Air Pollutants for Reciprocating Internal Combustions Engines. Federal Register/Vol. 75, No. 41/March 3, 2010.*

which facilitate grid reliability through peak shaving and offer a source of income for program participants provided that their generators are retrofitted to ensure reduced emissions during operation. Government and utility authorities in both the U.S. and Canada have approved such policies in order to ensure grid reliability and avoid the need for building additional capacity to meet a limited number of annual instances of excessive demand. For example, WGBH, Boston's public radio station, has agreed to meet power needs through its backup generators during times of peak demand. By doing so, WGBH receives approximately $20,000 per year while also gaining improved testing of its backup equipment to ensure its operability and help offset the cost of maintaining this necessary back-up power.

In other cases, retrofitting can provide energy savings through greater efficiency while also contributing to local air quality standards and community sustainability goals. Fort Delaware State Park in Delaware City, Delaware provided such a case for the state's Department of Natural Resources and Environmental Control (DNREC). The Park, which is located on Pea Patch Island in the Delaware River, is a popular tourist site containing a Union fortress dating back to 1859 which once housed Confederate prisoners of war. Thanks to the availability of federal funds dedicated to retrofitting diesel engines within the American Recovery and Reinvestment Act, DNREC decided to dedicate approximately $165,000 of these funds to the replacement

*The EPA's Diesel Emissions Reduction Program helps fund retrofit projects that can bring efficiency and emissions reduction benefits to diesel vehicle and equipment owners. A report of the program's first year results was sent to Congress last year.*

of two old uncontrolled power generating units on the island with one slightly larger diesel powered microturbine. Through the project, DNREC will be able to install a new HVAC and climate control system while simultaneously reducing operation and maintenance costs of providing power to the island by several thousand dollars annually. As a result, Delaware citizens and visitors will benefit from improved services in the park, lower park operating costs, and most importantly, more than 99% reduction in both NOx and PM emissions.

## Retrofit Funding

In these tough economic times, not all communities can afford the investments needed to reach their environmental and sustainability goals. Fortunately in the Fort Delaware case, the Environmental Protection Agency's Diesel Emissions Reduction Program provided funds to offset the retrofit investment cost required to reap environmental and financial benefits.

The Diesel Emissions Reduction Program was created under the Energy Policy Act of 2005. Over the last several years, the program has received approximately $60 million in annual funding, with the exception of last year's American Recovery and Reinvestment Act which provided an additional $300 million. (A full description of the program is available in *Powerline*, July/August 2009). The most recent solicitation for project proposals was in late 2009, with award announcements expected throughout the coming spring and summer months. One final solicitation is expected sometime in the fall of 2010 for an undetermined level of funds. President Obama requested $60 million for the program in FY2011, however a coalition of industry, environmental and public agency organizations have written Members of Congress to request this amount be increased to $100 million.

This program is responsible for significant emission and energy use reductions as outlined in the first year program results which were submitted to Congress

in October 2009. According to the report, the program's first year funding of $49.5 million resulted in fuel savings of more than 3.2 million gallons along with NOx and PM emission reductions of 46,000 and 2,200 tons respectively (see full report at *http://www.epa.gov/otaq/diesel/documents/420r09006.pdf.)* As concern grows about more stringent national clean air standards for ozone and fine particles, the greater use of diesel generators during summer months when high electricity demand coincides with high ozone levels, could raise interest in upgrading and modernizing existing units through DERA applications from the power generation sector, particularly as the 2013 NESHAP deadline approaches.

## What Does This Mean for Me?

Owners and operators of existing diesel powered generators have some new and important decisions to make in the coming years. There are exciting new funding and emissions control technology options available to owners and operators of these units, which will aid in dispelling the outdated, uneducated perception of diesel as an old, dirty power source. Tomorrow's energy sources must provide efficient, clean and reliable power. The Diesel Technology Forum (DTF), a recent EGSA member, is working to help educate policymakers, fleet managers and the media about diesel's technology transformation and its potential to offer immediate efficiency and environmental savings along our country's energy technology pathway. DTF is developing a new power generation workgroup within its membership to promote the advantages of clean diesel as a reliable, clean energy power source and welcomes other EGSA members who wish to join DTF and work with us in this effort.

No one technology holds the key to our nation's future energy needs. Both traditional and alternative energy technologies will be judged according to their relative costs and benefits. Established technologies will be forced to evolve and new technologies will need to be further developed if we wish to continue growing while maintaining, if not improving, our quality of life. Diesel technology will continue to play a role in our energy future, and has already proven to be a formidable competitor in the race for tomorrow's energy technology of choice. While manufacturers bring the newest, cleanest diesel generators to market with Tier 4 engines by 2014, the growth of retrofit technology options and the continued funding for voluntary equipment upgrades will facilitate the competition between the old and new technologies and possibly help transform yesterday's technologies into tomorrow's energy solutions.

## About the Author

Dawn Fenton is with the Diesel Technology Forum, a nonprofit national organization dedicated to raising awareness about the importance of diesel engines, fuel and technology, working with policymakers and other stakeholders on common solutions. Forum members are leaders in clean diesel technology and represent the three key elements of the modern clean-diesel system: advanced engines, vehicles and equipment, cleaner diesel fuel and emissions-control systems. For more information, visit their web site at *www.dieselforum.org.* ■

# 45th Annual Spring Convention

*Continued from page 32*

and how loud different levels can be. The presentation covered a variety of different areas, including how sound must have a source, path and receptor and how these three factors affect our ability to control it.

Other featured presentations included:

- A presentation to the International Trade Committee by Sandra Campbell, Senior International Trade Specialist, U.S. Department of Commerce and Foreign Commercial Service, on tapping into the export resources of the U.S. Commercial Service.
- A presentation to the Education Committee by Bill Heacock of Heacock, Perez and Associates on e-learning with an exploratory group discussion on how EGSA might utilize it to deliver new and existing education programs to EGSA Members and industry professionals.
- Presentations to the Distributor/Dealer Committee by Jim Cress, Ring Power Corporation, on the types, administration and benefits of Customer Service Agreements (CSAs) and John Napurano, Separ of the Americas, on the importance of maintaining fuel supply for on-site generators.
- A presentation to the Government Relations Committee by Bob McKenzie, Marine Corp Systems Command, on the Marine Corps Expeditionary Power Systems Program Office and the Marine Corps' second-generation Integrated Trailer ECU Generator (ITEG II), the Energy Forward Operating Base (FOB) Initiative and potential business opportunities for EGSA Members.
- A presentation to the Government Relations Committee by Paul Richard, Deputy Project Manager, U.S. Department of Defense (DoD) Project Manager Office for Mobile Electric Power (PM MEP) on PM MEP's current power generation programs and related business opportunities for EGSA Members.

## EGSA Manufacturers Showcase

In addition to the lineup of educational sessions, the convention featured EGSA's highly successful Manufacturers Showcase in which On-Site Power Manufacturers, attending Distributor/Dealers and Manufacturer Representatives took the opportunity to dialog and network in a traditional exhibition setting.

This year's convention also served to mark the Association's 45th anniversary. Founded in 1965 as the Engine Generator Set Manufacturers Association (EGSMA), EGSA has grown from a handful of the industry's leading suppliers to over 700 Manufacturers, Distributor/Dealers, Manufacturer's Representatives, Contractor/Integrators, Consulting & Specifying Engineers, Service firms, End-Users and others throughout the U.S. and around the world that make, sell, distribute and use On-Site Power generation technology and equipment, including generators, engines, switchgear, controls, voltage regulators, governors and much more. ■

For more information about EGSA or the Spring Convention, visit *www.EGSA.org* or call 561/750-5575. ■

# Application for Membership

## ELECTRICAL GENERATING SYSTEMS ASSOCIATION

1650 South Dixie Highway, Suite 400, Boca Raton, FL 33432 • 561-750-5575 • FAX 561-395-8557
E-Mail: *e-mail@EGSA.org* • World Wide Web: *www.EGSA.org*

*Under the leadership of its Board of Directors and operating through its various committees and staff, EGSA strives to educate, provide networking opportunities and share relevant knowledge and trends with industry professionals including manufacturers, distributor/dealers, engineers, manufacturer representatives, contractor/integrators and others serving On-Site Power consumers.*

## 1. Contact Information

***Please type or print all information in upper and lower case (NOT ALL CAPS!)***

Company _

Address __

City _____ State/Province _____

Zip/Postal Code _____ Country _____

Phone _____ FAX _____

Official Representative _____ Title _____

Representative's E-Mail _____ Company's Web Address _____

How did you hear about EGSA? ❑ Web site ❑ *Powerline* magazine ❑ Colleague ❑ POWER-GEN ❑ Other _____

Why are you joining EGSA? ❑ Certification Program ❑ CEU Program ❑ Power Schools ❑ Buying Guide Listing ❑ Other _____

## 2. Member Classification

*Read the Membership classifications below and check the box that describes your firm's classification.*

### I. FULL MEMBERSHIP

❑ MF **Manufacturer Membership**
Any individual, sole proprietor, partnership or corporation seeking membership must apply for a Full Membership as a manufacturer if they meet one or more of the following criteria:

1. They manufacture prime movers for power generation.
2. They manufacture generators or other power conversion devices producing electricity.
3. They manufacture switchgear or electrical control devices.
4. They manufacture or assemble generator sets, UPS systems, solar power, hydropower, geothermal, or any other power production or conversion system including related components or accessories for national or regional distribution.
5. They are a wholly owned subsidiary of a firm that qualifies under rules one through four.

❑ DD **Distributor/Dealer Membership**
Any individual, sole proprietor, partnership or corporation actively engaged as a distributor or dealer for products listed under Manufacturer Membership may apply for Full Membership as a Distributor/Dealer. If an organization qualifies under Manufacturer Membership, it is not qualified under this section.

❑ CI **Contractor/Integrator Membership**
Any individual, sole proprietor, partnership or corporation actively engaged as a Contractor or Equipment Integrator of products listed under Manufacturer Membership, not bound by brand, geographic territory or contractually obligated as a Distributor/Dealer of a specific product. These firms typically purchase products from a Distributor/Dealer, Manufacturer or Retailer, adding value through installation, product knowledge, relationships, unique services, etc., and then re-sell the resulting product to an end-user.

❑ MR **Manufacturer's Representative Membership**
Any individual, sole proprietor, partnership or corporation actively engaged in the representation of products listed under Manufacturer Membership may apply for Full Membership as a Manufacturer's Representative. If an organization qualifies under Manufacturer Membership, it is not qualified under this section.

❑ EM **Energy Management Company Membership**
Any individual, sole proprietor, partnership or corporation engaged in energy management, including Energy Service Companies (ESCOs), Independent Power Producers (IPPs), Integrators, Aggregators, and other similar enterprises may apply for Full Membership as an Energy Management Company.

❑ **Associate Full Membership** *(mark appropriate category at right)*
Any individual, sole proprietor, academic institution, student, partnership or corporation meeting the requirements of Associate Regular Membership may apply for Full Membership at their option to enjoy the privileges of Full Membership, including the rights to vote and to serve on EGSA's Board of Directors. Initiation fees and annual dues will be assessed at the existing non-manufacturer Full Member rates.

### II. ASSOCIATE REGULAR MEMBERSHIP

❑ AA **Trade Publication Membership**
Any trade publication dealing with the electrical generating systems industry or its suppliers may apply for Associate Membership–Trade Publications.

❑ AB **Trade Association Membership**
Any trade association made up of individual or company members sharing a common interest in the electrical generating systems industry may apply for Associate Membership–Allied Associations.

❑ AC **Engineer Membership**
Any consulting or specifying engineer may apply for Associate Membership–Engineer. Membership may either be held in the employer's name or individual's name under this classification. Individuals whose employer qualify as a Full Member, as described in the Full Membership section, do not qualify for this category.

❑ AD **End-User Membership**
Any individual employee of a company who owns or operates electrical generating equipment and/or related switchgear or components, whose responsibility to his employer includes planning, design, installation, supervision, or service of such equipment may apply for Associate Membership–User. Membership may either be held in the employer's name or individual's name under this classification. Individuals whose employer qualify as a Full Member, as described in the Full Membership section, do not qualify for this category.

❑ AE **Service Membership**
Any individual, organization or academic institution that offers services such as research, testing or repair to the electrical generating systems industry may apply for Associate Membership–Services. Membership may either be held in the individual's name or the organization's name under this classification. Individual companies whose employer or parent organization qualifies as a Full Member, as described in the Full Membership section, do not qualify for this category.

❑ AG **Educational Institution Membership**
Any postsecondary vocational-technical school or college offering on-site power generation-related instruction may apply for Associate Membership–Education Institution.

❑ AR **Retiree Membership**
Any individual who retires from a member company may apply for Associate Membership–Retired. This classification does not apply to any individual who is employed more than 20 hours per week.

❑ AF **Student Membership**
Any individual currently enrolled at an academic institution may apply for Associate Membership–Student.

## Dues Schedule (Use for Section 3)

| | Annual Dues | Initiation Fee | TOTAL |
|---|---|---|---|
| Manufacturer | $825 | $200 | $1025 |
| Distributor/Dealer | $285 | $100 | $385 |
| Contractor/Integrator | $285 | $100 | $385 |
| Manufacturer's Representative | $285 | $100 | $385 |
| Full Associate Member | $285 | $100 | $385 |
| Energy Management Company | $200 | $100 | $300 |
| Regular Associate Member | $200 | $100 | $300 |
| Retiree Member | *Complimentary* | $0 | $0 |
| Student Member | *Complimentary* | $0 | $0 |

**NOTE:** A FULL 12-MONTH DUES PAYMENT MUST BE RECEIVED WITH THIS APPLICATION. The Association's Membership Year is January 1 through December 31. Dues payments that extend beyond the first Membership Year will be applied to the second year's dues.

**FULL PAYMENT MUST BE RECEIVED WITH APPLICATION.**

## 3. Membership Dues (Please fill in the appropriate TOTAL amount from the above dues schedule.)

Membership Dues $_____

Membership Plaque (optional)** $ 39.95**

*On-Site Power Reference Book* (optional)** $ 125.00**

**Florida Residents**: Add 6.5% Sales Tax to ** items $_____

*Continental US Residents add $5 shipping/handing to**items.* $_____
*Non Continental US Residents should call EGSA Headquarters for shipping charges for **items.*

**TOTAL** $_____

## 4. Payment Method (Payable in US$ drawn on U.S. bank, U.S. Money Order, or American Express)

❑ Check #_____ Amount Due $ _____

❑ Money Order

❑ Mastercard ❑ Visa ❑ American Express

Card # _____ Exp. Date _____

Signature: _____

Print Name: _____

## 5. Products/Services

Please describe the nature of your business (50 words or less, NOT ALL CAPS). If you are a Manufacturer's Representative or Distributor/Dealer, please indicate which manufacturers you represent and/or distribute for; if you are a student, please provide the name and location of your school, your major and your anticipated graduation date:

_____

_____

_____

_____

_____

_____

Do you buy AND sell equipment? ❑ Yes ❑ No Do you manufacture packaged equipment? ❑ Yes ❑ No

### Available Codes:

01 --- Batteries/Battery Chargers
02 --- Control/Annunciator Systems
29 --- Education
30 --- Emission Control Equipment
04 --- Enclosures, Generator Set
05 --- Engines, Diesel or Gas
06 --- Engines, Gas Turbine
07 --- Engine Starters/Starting Aids
08 --- Filters, Lube Oil, Fuel or Air
28 --- Fuel Cells
03 --- Fuel Tanks and Fuel Storage Systems
09 --- Generator Laminations
10 --- Generator Sets
11 --- Generators/Alternators
12 --- Governors
13 --- Heat Recovery Systems
14 --- Instruments and controls, including meters, gauges, relays, contactors, or switches
15 --- Load Banks
16 --- Motor Generator Sets
17 --- Radiator/Heat Exchangers
18 --- Relays, Protective or Synchronizing
19 --- Silencers/Exhaust Systems/Noise Abatement
20 --- Solenoids
21 --- Swtichgear and Transfer Switches (Automatic or Manual), Bypass Isolation Switches, and/or Switchgear Panels
22 --- Trailers, Generator Set
23 --- Transformers
24 --- Uninterruptible Power Supplies
25 --- Vibration Isolators
26 --- Voltage Regulators
27 --- Wiring Devices or Receptacles

### Enter codes here:

**Products sold:** _____

_____

**Products rented:** _____

_____

**Products serviced:** _____

_____

## 6. Sponsor(s)

: A"Sponsor" is an EGSA Member who interested you in filling out this application. It is not mandatory that you have a sponsor for the Board to act favorably on this application; however, if a Member recommended that you consider membership, we request that individual's name and company name for our records.

Sponsor Name _____ Company Name _____

## 7. Official Representative's Authorization

Signature _____ Date _____

# INDUSTRY NEWS

## Vendors Offer Technical Demos at Marine Corps Base

U.S. Navy and Marine Corps leaders will tour technical demonstrations by nearly 30 commercial vendors at the first Experimental Forward Operating Base (ExFOB) at Marine Corps Base Quantico.

The ExFOB is an interservice collaborative effort. The Marine Corps Warfighting Laboratory is working closely with the Marine Corps Combat Development Command, the Office of Naval Research, Marine Corps Systems Command, the Marine Corps Expeditionary Energy Office and Marine Corps Base Quantico to conduct a four-phase experiment that tests methods to reduce the logistic needs of combat units. Aside from ecological and cost benefits, reducing resupply needs can extend a Marine unit's sustainability and keep Marines safer. Fewer trucks on the road decrease Marines' exposure to improvised explosive devices (IEDs) and other dangers.

Phase One of the experiment simulated the energy and water demands of a Marine unit at forward operating bases similar to those in Afghanistan and determined the baseline requirements of company-size and smaller FOBs.

The current phase evaluates existing commercial technologies to produce water on site to meet the Marines' needs and increase power generation efficiency to sustain the base. Commercial, off-the-shelf technologies have the potential to increase the efficiency of Marine Corps forward-deployed forces, sustaining them over longer periods.

During Phase Three, a Marine unit preparing to deploy to Afghanistan will use the renewable technology and energy-saving techniques learned during the earlier phases. Phase Four will facilitate future science and technology efforts by gathering data on experimental systems.

The Marine Corps Warfighting Laboratory conducts concept-based experiments and integrates operational concepts with how the Corps operates and fights. Experiments coupled with other research improve the expeditionary warfighting capabilities of the Marine Corps today and far into the future.

## Woodward to Present Control Seminars in Houston

Woodward Governor Company has announced it will host two technical seminars on June 15 and 16, 2010 at the Hilton Houston Hobby Airport hotel in Houston, Texas.

The first seminar, "Introduction to Power Generation, Control, and Power Management," will be held June 15 and will focus on the principles of distributed power generation, synchronization, load sharing, power management and system protection. The instructor will be David Cutro, an Application Engineer with the Woodward Electrical Power Systems business segment.

The second seminar, "Steam Turbine, Gas Turbine and Compressor Basics," will be held June 16 and will focus on the fundamentals, applications, control and protection of steam and gas turbines and compressors. It will also feature a discussion on American Petroleum Institute Standard 612 led by instructor Rich Kamphaus, Turbomachinery Controls Product Line Manager with the Woodward Turbine Systems business segment.

*Continued on next page*

# EGSA NEWS

*Continued from page 25*

The EGSA Awards & Member Recognition Program plays a role at this stage of the process. Using the EGSA Volunteer Database each year, EGSA Staff track the accomplishments, contributions and periods of service for nearly 100 active Association volunteers. Just as each EGSA office has its criteria, so do the EGSA Awards. Staff compare volunteers' experience to each award's criteria and creates lists of names for the EGSA Board's consideration and vote. The same database serves as an information resource for the EGSA President's use in considering possible candidates for Committee Chairs and other by-appointment positions. Committee attendance, conference participation as a speaker, extracurricular activities and association volunteer service such as serving as a Committee Chair or Director—these details are compiled together to create a "Who's Who" that EGSA uses to evaluate nominees for Board vacancies.

This little noticed but extensive and ongoing process addresses a number of the Association's immediate needs. For example, as the Association continues to grow in size and scope, the EGSA Board, Staff and Nominating Committee have a consistent means of crediting individual members' accomplishments and giving them their due. What's more, it helps quickly identify areas within EGSA that may be underserved, identify potential authorities on a variety of subject matter to outside interests such as the national media and, ultimately, serves as a report card for the Board by which it can measure how effective it has been in its efforts to identify, mentor and groom the next generation of EGSA leaders.

As a result of all these changes and provisions, the Strategic Plan has equipped EGSA with the means to introduce new members to the Association, educate them, identify them as leaders and support them to ensure their personal success, thus ensuring the future growth and viability of the organization. ■

### Nominating Process—Then and Now

The process for nominating and electing Directors and Officers has been revised to place a greater emphasis on evaluating potential nominees.

| Then | Now |
|---|---|
| • Nominating Committee Calls for Nominations<br>• Staff verifies nominees are in good standing<br>• Committee assembles slate, presents to voting members for approval | • Nominating Committee Calls for Nominations<br>• Staff verifies nominees are in good standing, presents information on volunteer experience, offices held, accomplishments, etc.<br>• Committee qualifies nominees, assembles slate, presents to Board for approval |

FOR SALE/RENT
24 / 7 EMERGENCY SERVICE
BOILERS
20,000 - 400,000 #/Hr.
DIESEL & TURBINE GENERATORS
50 - 25,000 KW
GEARS & TURBINES
25 - 4000 HP
WE STOCK LARGE INVENTORIES OF:
Air Pre-Heaters • Economizers • Deaerators
Pumps • Motors • Fuel Oil Heating & Pump Sets
Valves • Tubes • Controls • Compressors
Pulverizers • Rental Boilers & Generators
847-541-5600 FAX: 847-541-1279
WEB SITE: www.wabashpower.com
wabash POWER EQUIPMENT CO.

Both seminars are open to the public and qualify for Engineering Professional Development hours. Detailed seminar outlines and registration information are available online at *www.woodward.com/houston_seminar.htm*

Woodward is an independent designer, manufacturer, and service provider of energy control and optimization solutions used in global infrastructure equipment. For information visit *www.woodward.com*.

## Cummins Power Generation Acquires Terex Generator Set

Cummins Power Generation has announced it has purchased the generator set assets of Terex Corporation, Westport, CT. The agreement increases Cummins Power Generation's rental business capabilities through expanded production operations in its Fridley, MN facility.

"Cummins Power Generation and Terex Corporation have had a long-standing relationship," said Larry Fetting, Director, Global Rental Segment Development. "We are excited about our investment to acquire the Terex assets. We see this as a natural next step in our commitment to exercise more control concerning our rental product manufacturing requirements and to support the growth of our rental business, with the primary goal of enabling us to better meet the needs of our customers."

"Even more important," Fetting added with emphasis, "our customers can be assured that this acquisition reaffirms our dedication to providing them with an enhanced level of rental product quality, reliability and service. This new 'one-stop shop' structure strengthens a number of our rental requisites: better communication with distributors, increased options and faster response to customers, and a wider array of available products overall."

Cummins will assume aftermarket support (parts, service and warranty) for the Cummins Power Generation and Terex rental generator product lines on July 21, 180 days post-sale.

In addition to expanding its product offering from the Fridley, Minnesota, facility, Cummins remains committed to providing industry-leading fuel-efficient, high performance low-emissions diesel engines to generator original equipment manufacturers (GOEMs) internationally. Joe Feldman, G-drive Sales and Marketing Manager noted, "Cummins Power Generation has been investing in a comprehensive G-drive product line to help OEMs and delivery partners transition to T4i-compliant products for 2011."

Cummins Power Generation, a subsidiary of Cummins Inc., is a leading provider of innovative solutions for commercial, industrial, recreational, emergency, peaking and residential power needs. For information visit www.cumminspower.com.

## Mountjoy Elected to Bay Diesel Board of Directors

Bay Diesel & Generator has announced that Tom Mountjoy has been elected to its Board of Directors. Previously, Mountjoy had served as a consultant for Bay Diesel in areas of corporate development.

Bay Diesel President Scott Wheeler said that "throughout the many years that I have known Tom he has always shown tremendous energy and has provided a wealth of solid ideas to the benefit of Bay Diesel. His vast experience in successful businesses and 'common sense' approach to solving problems makes him a welcome addition to our Board of Directors. We are excited to have his fresh ideas as we expand our operations."

Mountjoy recently retired as Executive Vice President of CI Travel. He still serves on the CI Travel Board of Directors in addition to those of WHRO and Norfolk Sister Cities. Prior to joining CI Travel, he owned and operated Recreational Concepts, Inc., which focused primarily on the tour boat business. He holds a Masters of Business Administration from the University of Maryland and an undergraduate degree from Virginia Tech.

Bay Diesel & Generator is a veteran-owned small business with offices in Chesapeake, Norfolk, and Richmond. The company specializes in diesel engine sales and repair for multiple national brands, parts sales, and generator sales, repair, and maintenance. The company is an Authorized Marine Dealer for Caterpillar through Carter Machinery and the regional distributor for Generac Power Systems generators.

## Wärtsilä and ABB Turbo Systems Developing New Application

Wärtsilä and ABB Turbo Systems are co-operating in a joint development program for a new application of two-stage turbocharging on large diesel engines. According to a press release, advanced engine technology, together with two-stage turbocharging, offers significant advantages in fuel consumption and engine emissions.

Wärtsilä is focusing on developing advanced engine technology, which with the turbocharger, is able to reach the highest possible performance and become a cost-effective commercial solution for its customers. ABB Turbo Systems is delivering the turbocharging technology with defined performance in terms of airflow, pressure ratios and efficiency.

"ABB Turbo Systems is one of Wärtsilä's main development partners, and has played an important role in Wärtsilä's product development for more than three decades. Our customers benefit from the productive and successful R&D activities of our two companies, both of whom are leaders in their fields," says Mikael Troberg, Director of Wärtsilä Testing & Performance.

The new engine design uses two turbochargers to achieve an efficiency rating as high as 76 percent with reduced fuel consumption and CO2 emissions according to extensive joint testing of the ABB system on the Wärtsilä engine at Wärtsilä's test facility in Vaasa, Finland. Targets for the development program are said to have been successfully met and the two companies plan to initiate a major pilot project with a customer in the near future. ■

# Stay Competitive with the EGSA Electrical Generator Systems Technician Certification Program

*Do your techs wear this patch? This is the uniform patch worn by Certified Technicians. It sends a clear message that this Tech and his Employer are special. The Tech has proven his skill and knowledge by passing a rigorous test; his Employer is committed to excellence and high standards. Certified Technicians can proudly use the title "EGSA Certified Electrical Generator Systems Technician."*

| EGSA Member Item Number | Non-Member Item Number | Quantity | Item Description | EGSA Member Price | Non-Member Price | Item Total |
|---|---|---|---|---|---|---|
| FSU 089 | | | EGSA Electrical Generator Systems Technician Certification Test (EGSA Member) | $130 | | |
| | FSU 090 | | EGSA Electrical Generator Systems Technician Certification Test (Non-Member) | | $395 | |
| FSU 091 | | | EGSA Electrical Generator Systems Technician Certification Study Guide (EGSA Member) | $40 | | |
| | FSU 092 | | EGSA Electrical Generator Systems Technician Certification Study Guide (Non-Member) | | $80 | |
| FSU 126 | | | EGSA Reference Book Bundle—Study Guide plus *On-Site Power Reference Book* (EGSA Member) | $175 | | |
| | FSU 127 | | EGSA Reference Book Bundle—Study Guide plus *On-Site Power Reference Book* (Non-Member) | | $315 | |

6% sales tax applies to sales of Study Guides to Michigan Residents ONLY. If your Michigan company is tax exempt, please fax a copy of your tax exempt status or include a copy with this order form when ordering by mail. Please note: Each person taking a test will pay a proctoring fee of approximately $40 at the time of testing. These fees are paid to administer the test and to send it to Ferris State University for scoring. Proctoring fees may vary by location.

Sub Total

MI Residents Add 6% Sales Tax *(See Note)*

**TOTAL DUE**

## Payment

**IMPORTANT! FULL PAYMENT MUST ACCOMPANY THIS FORM.**
Faxed forms **must** include credit card numbers or they can not be processed.

❑ Check *(made payable to Ferris State in U.S. funds)*

❑ Purchase Order Number _____

❑ American Express ❑ VISA ❑ MasterCard ❑ Discover

Credit Card # _____

Cardholder: _____

Exp. Date: _____ Security Code/CVV2 Number*: _____

**VISA/MC: the CVV2 is the last 3 digits of the number printed on the back of the card; AMEX: the CVV2 is the 4-digit number above the card number on the front of card.*

Credit Card Billing Address:

_____

_____

_____

**IMPORTANT! YOUR SIGNATURE MUST ACCOMPANY THIS FORM.**
*By my signature below, I acknowledge that the EGSA Technician Certification Test is designed and intended for electrical power generator equipment technicians with a minimum of three years experience, and that I meet that experience requirement.*

Signature: _____

Print Name: _____

## Shipping

Please note: shipping to a physical street address will avoid delays. Shipping costs are included in U.S.A. deliveries. Shipping outside the U.S.A. is additional. If your shipment is outside the U.S.A, contact Ferris State to determine the actual charges.

This address is a ❑ Residence ❑ Business ❑ Both

Ship to (Name): _____

Company: _____

Address 1: _____

Address 2: _____

City: _____

State: _____ Zip: _____

Phone: _____

FAX: _____

Email: _____

Mail or Fax this completed form with payment to

Fax 231-591-5821

**Ferris State University**

EGSA Certification Program

1020 Maple Street-Suite 117 • Big Rapids, MI 49307

Toll Free 866-880-7674 • Direct Line 231-591-5822

# Stay on Top of Your Game with EGSA's Electrical Generator Systems Technician Certification Program

Think things move pretty fast in today's business world? Think how fast they'll be moving one, five or even 10 years down the road. That's why you need every advantage to stay on top.

It's no secret that technology is becoming more complex—not less—and that makes today's On-Site Power Generation System a lot more expensive. End-users—your customers—don't want just anybody with a basic knowledge of mechanics to install and maintain their equipment. They want to be confident that all work has been performed by qualified personnel. Suppliers want assurance that skilled technicians are performing maintenance and repairs to guard against unnecessary returns or warranty repairs.

## As good as your word

In the past, your word was the only assurance that your technicians are skilled and knowledgeable. But now, through EGSA's Electrical Generator Systems Technician Certification Program, there is a way that you can back up those words with objective evidence of your technicians' proficiency.

EGSA offers you a big advantage: For the first time in our industry, we have an objective and accurate way to determine generator technician proficiency. That means that the same standards will be used to measure the skills and knowledge of technicians from Maine to Manitoba and Mexico. Yes, Manitoba and Mexico! EGSA has determined that there is no reason why the test could not be fairly applied to any NAFTA technician.

## What are the benefits?

For the Employer, certification helps ensure that your technicians have the critical knowledge and skills to succeed in their jobs. And everyone will be comfortable knowing that your certified technicians' expertise has been confirmed by *the* industry organization through a program that was developed by a university. Encouraging and helping your technicians become certified signifies your commitment to the highest of standards. Plus, it lends an added level of credibility to your firm and can sharpen your competitive edge. Employing certified technicians will promote customer satisfaction and you won't have to be shy about offering assurance that your technicians are qualified. Certification can also help you select potential new hires, analyze job performance, evaluate employees and motivate technicians to enhance their skills and knowledge.

Think about the message that certification sends to those with whom you do business. Why would anyone want a technician who isn't certified performing critical maintenance or repair tasks? Employing certified technicians gives you an added tool with which to market your business.

As our members have said, "We've seen too many backyard mechanics damage expensive equipment. This program will provide credibility for my company and will help build pride and a commitment from technicians to be the best."

## For the Technician

Certificate holders benefit too. Certification shows employers, clients, and associates that you are committed as a professional. It provides recognition of your knowledge and skill, shows your commitment to your profession and can help with job advancement. Certification is a mark of excellence that you carry with you everywhere you go.

Acquiring certification indicates that you have the knowledge and proficiency required to perform as an Electrical Generating Systems Technician professional. Becoming certified can increase your salary, enhance your skills, and make your job more satisfying.

*Certification helps ensure that your technicians have the critical knowledge and skills to succeed in their jobs.*

## The Certification Test

EGSA collaborated with Ferris State University to develop the certification test and program. Through a scientific process, our panel of technical experts identified 12 duty areas (such as "Basic Electricity") and 61 tasks (such as "demonstrate knowledge of AC electrical theory") within the duty areas. The duty areas and tasks were ranked and rated in terms of their relative importance, the frequency with which a task is performed, and skill level (i.e. Senior/Expert; Intermediate; and Entry Level.) All this data was combined to develop the certification test that was then statistically validated through a pilot test taken by generator technicians from across the United States.

## Who can take the Test?

**Technicians applying to take the test must have a minimum of three years of work experience as an electrical power generator equipment technician.** To be confident that they will pass the test, techs must have a comprehensive knowledge of basic electricity, the functions of a gen-set's mechanical and electrical components, the interactions and relationships among components and an understanding of various elements of the installation, service, maintenance, and repair of gen-sets and On-Site Power generation systems.

## Use the Study Guide to prepare!

Use of the program's Study Guide is an excellent way to help technicians prepare for the test and should clearly indicate if they are ready to take (and pass) the certification exam. In addition to useful formula pages, the guide contains almost 200 multiple choice practice questions that cover all parts of the certification test. In addition to identifying the correct answer, the guide also indicates in most cases why a particular choice is correct and why the others are incorrect. The Guide also identifies resource material where technicians can get additional or more in-depth information about a given topic.

Need more information? Visit us online at *www.EGSA.org* to find extensive and detailed information about the certification program. Or contact EGSA Director of Education George Rowley via e-mail at *G.Rowley@EGSA.org*.

## Certification Testing Covers:

- *Automatic Transfer Switches*
- *Communication & Documentation*
- *Engine Generator Instrumentation & Controls*
- *Multiple Generator Switchgear & Controls*
- *Troubleshooting System Problems*
- *Auxiliary Support Systems*
- *Basic Electricity*
- *Prime Movers*
- *Governors*
- *Voltage Regulators*
- *Generators/Alternators*

## Disclaimer of Liability

*Certified status is an indication that an individual has completed a combination of defined education, experience or examination requirements. However, Certification is not a guarantee or assurance of the competence or ability of any particular individual. Further, given the rapid changes in the field, the Electrical Generating Systems Association cannot warrant that the Examination and other Certification materials will at all times reflect the most current state of the art. The Electrical Generating Systems Association disclaims liability for any personal injury, property or other damages of any nature whatsoever, whether special, indirect, consequential or compensatory, directly or indirectly resulting from the Certification Program or the acts or omissions of any person who has been Certified by the Electrical Generating Systems Association. In conducting the Certification Program, including issuing Certifications, the Electrical Generating Systems Association is not undertaking to render professional or other services for or on behalf of any person or entity, nor is the Electrical Generating Systems Association undertaking to perform any duty owed by any person or entity to someone else. Anyone using the services of a person who has been Certified should rely on his or her own independent judgment or, as appropriate, seek the advice of a competent professional in determining the exercise of reasonable care in any given circumstances.*

**Electrical Generating Systems Association**
1650 S. Dixie Hwy, Suite 400
Boca Raton FL 33432
561-750-5575 • Fax: 561-395-8557
Visit us online at *www.EGSA.org*

# EGSA JOB BANK

### POWER GENERATION TECHNICIANS

Cummins NPower, the area's exclusive engine & power generation systems distributor for Cummins and Onan products is seeking qualified Field Service Power Generation Technicians to diagnose, troubleshoot, & repair electrical generator systems & related engine mechanical failures, & utility transfer switches & switchgears. Positions are available in Illinois, Wisconsin & North Dakota. To view all open positions visit our website, *www.cumminsnpower.com*. To apply, send a resumé via email to *npowerhr@cummins.com* or fax to 651-286-2111. EEO/AA

### Inside Sales Representative

TAW® is seeking an experienced **Inside Sales Representative** in Pompano Beach, FL. TAW® sells Kohler generators in FL & S. GA. Process customer orders on generator systems & related products & services, advise on product application, availability, correct parts, catalog or issue number & shipping charges & price. 3-5 years experience preferably in generator product or service sales preferred. Exceptional salary & benefits. Email resume to *ellen.donegan@tawinc.com* or fax 813-217-8076. DFWP.AA/EOE. *www.tawinc.com*

### TECHNICAL SUPPORT ENGINEER

DEIF, Inc., worldwide supplier of controls for power generation, is looking for a Technical Support Engineer in our Fort Collins, CO, office. Duties include answering customer's technical inquiries via phone and email, start-up/commissioning services, servicing existing installations in North America and some international locations, and delivering training on our products. Candidates must have BS-EE with at least 2 years or AS with at least 5 years relevant experience with distributed generation. Marine industry experience helpful but not required. Domestic and international travel required: estimated to be 30-50%. Extensive training provided, most at our HQ in Denmark. DEIF offers a comprehensive benefits package including medical, dental, 401K with match, life and LTD insurance, and competitive salary. For a full description, please see *www.deif.com*. To apply or inquire, please email *us@deif.com* or call 970/530-2261.

### Account Manager

TAW® is seeking an experienced Account Manager in Tampa, FL. TAW® sells Kohler generators in FL & S. GA .Will sell & quote services & products to targeted accounts & the Federal Government via GSA schedule to current & prospective clients on generator systems & related products & services. Build relationships at Director level & above in Fortune 1000 companies. Base & commission with exceptional benefits package. Email resume to *ellen.donegan@tawinc.com* or fax 813-217-8076. DFWP.AA/EOE. *www.tawinc.com*

### Generator Technicians

Due to our continued growth, Central Power Systems & Services, Inc. has immediate openings for Generator Technicians at several of our Missouri, Kansas and Oklahoma facilities. We offer a strong base wage and a full benefit package (including FREE MEDICAL & LIFE insurance) and PAID RELOCATION depending on skill set. Fax a cover letter, salary requirements and your resume to 816-781-4518 or e-mail it to *jobs@cpower.com* EOE

### GENERATOR SERVICE TECHNICIANS

KELLY GENERATOR & EQUIPMENT, INC., the mid-Atlantic leader in standby electrical generators is seeking experienced Generator Technicians. We are a full service distributor of emergency standby and prime power located in the mid-Atlantic region that covers Delaware, Maryland, Northern Virginia, West Virginia and Washington, DC.

We offer SALES, SERVICE, PARTS & RENTALS

- We have an extensive Service & Parts Department to back up your work.
- We offer factory training on the lines we represent as well as "in house" training.
- We offer medical, dental, vision, 401(k), profit sharing, short and long term disability, paid holidays, annual leave, overtime and paid "On Call."

Must have a High School Diploma (Vo-tech or GED), 3-5 years experience servicing industrial generator sets and associated equipment. Must be able to service, repair and troubleshoot the engine, as well as the alternator end and controls of the equipment. MILITARY A PLUS! Visit us on our website at *www.kge.com*. Fax RESUMES to 410-257-5227 or e-mail to *dkelly@kge.com*. **We Proudly Employ EGSA Certified Generator Technicians.**

### RENTAL SALES

KELLY GENERATOR & EQUIPMENT, INC, the mid-Atlantic leader in standby electrical generators is seeking an experienced RENTAL SALES person to join our team. We are a full service distributor of emergency standby and prime power located in the mid-Atlantic region: Delaware, Maryland, Washington DC, Northern Virginia and West Virginia. Develop strong relationships with electrical and general contractors, home builders, event companies, industrial and commercial end users and rental houses. Focus will be on the rental (and sales) of mobile generator sets as well as renting load banks. We offer a solid base with commission, medical, dental, vision, 401(k), profit sharing and more. FAX resumes to 410-257-5227 or e-mail *dkelly@kge.com*. **We Proudly Employ EGSA Certified Generator Technicians.**

### Generator Field Technician

PM Technologies, LLC has several immediate openings for Generator Technicians. We are located and operate in Michigan, Ohio and Northern Indiana. High School diploma or equivalent a must. Military experience a plus. Must be able to troubleshoot and repair the engine (diesel and gaseous) as well as the generator end. Customer interaction will be required on a daily basis. We need highly motivated, self sufficient people to assist in growing our expansion efforts at new branch locations. Benefits include company vehicle, 401k, health, dental and vision coverage's as well as paid bonuses for new account procurement. Please Fax resumes to 248.374.6408 or email to *dpopp@pmtech.org*

### Power Systems Outside Sales

D Square Energy Systems, Inc. the new Generac Industrial Dealer ( IDC )for Washington, Oregon and Northern Idaho is looking for an outside sales person for Western Washington. The successful candidate will have a demonstrated history of sales excellence in power generation and presentation to the Commercial and Industrial engineering community. Prior Generac experience a plus. This is an exciting opportunity for an independent minded seasoned rep to have a major impact in the designated territory and enjoy the resulting rewards. Send resume and salary requirements to *d2@d2energy.com* Att: Don N. Dunavant.

### Generator Field Technician-Experienced

Full-time experienced generator field technician opening in Ft. Lauderdale, FL. Requires advanced knowledge of standby generator systems with minimum 5 years experience. Working knowledge of 12 & 24 VDC controls. Company offers a full comprehensive benefits package. Competitive wage, company vehicle, laptop and cell phone for qualified candidates. Send resumes to *careers@acfpower.com* or fax to HR at 813-621-6980.

### Experienced Senior Generator Field Technician (Metro DC Area)

Small, established and fast growing firm is hiring an experienced generator technician. We do sales, installation, maintenance and repairs of gensets and firepumps. Must have at least five+ years experience in servicing industrial generator sets and associated equipment. Must be able to service, repair and troubleshoot the engine. We offer a strong wage base plus paid holidays, vacation, overtime and paid on call. Our technicians are provided with a company vehicle, laptop and cell phone. Please fax your resume to 703/339-5521 or email it to *SOSMindy@aol.com*.

### Experienced Power Generation Technicians Wanted!

Penn Power Systems, leaders in the power generation business, is actively seeking experienced field service technicians for open positions in our Buffalo, New York and Pittsburgh, Pennsylvania operations. Candidates should be familiar with natural gas and diesel prime movers with industry experience and knowledge of systems and controls. Penn Power Systems and its divisions offer industry competitive salaries, medical, 401(k), and vacation benefits. All interested parties should send resumes and work related history to *jobs@pennpowersystems.com* or call 1-877-736-4473. **We Proudly Employ EGSA Certified Generator Technicians.** EOE M/F/D/V

### Generator Sales

Central Power Systems & Services, Inc. – Has immediate opening for Generator Rental Manager based out of Kansas City, plus Generator Sales positions in Wichita, KS and Springfield, MO. We offer a strong base wage, incentive program and a full benefit package (including company car, gas allowance, expense card, FREE MEDICAL insurance, FREE LIFE insurance, paid vacation, profit sharing and 401(k), etc.). Fax a cover letter, salary requirements and your resume to 816-781-4518 or e-mail it to *jobs@cpower.com* EOE

### Lead Engineer

Lead Engineer to provide leadership/direction to the engineering/system design of our diesel particulate filters in compliance with EPA/CARB emission standards. Lead design team in development of new product designs and enhancing existing products. 10+ yrs. mechanical design/development, including as a team lead. Proven record of bringing products from concept through medium/large scale manufacture. SolidWorks or ProE expertise. Experience with canning/packaging techniques for high heat engine exhaust applications, modeling techniques for stress analysis, heat transfer and/or flow dynamics. Detail-oriented self-starter and team player with excellent communications, organizational and people management skills. Fast-paced, small team environment. *www.rypos.com*. Apply to *mecheng0110@rypos.com*. No 3rd parties.

# NEW EGSA MEMBERS

MF=Manufacturer DD=Distributor/Dealer CI=Contractor/Integrator MR=Manufacturers Rep
EM=Energy Management Co. AA=Trade Publication AB=Trade Association AC=Engineer
AD=End-User AE=Service AG=Educational Institution AR=Retiree AF=Student

**Cascade Engine Center** . . . . . DD
Kim Larson, Marketing Manager
Tukwila, WA
We represent HiPower Generator units in the Pacific Northwest.

**Central Florida Power Systems** . . . . . DD
David Shaver, President
Sanford, FL
Central Florida Power Systems sells, installs and services all types of generators: small home, commercial, industrial. Authorized dealer for Generac, Kohler, Briggs & Stratton.

**Compass Solutions International Ltd.** . . . . . DD
Justin Cunningham
Nassau, New Providence, Bahamas
We are a dealer of Mitsubishi products in the Bahamas. Also provide design, engineering and installation services. Approved vendor to government power authority. We can also service your cable and switchgear requirements.

**Crestchic** . . . . . MF
Keith Watkins, Sales Rep.
San Diego, CA
Crestchic USA offers a complete line of compact, portable load bank modules built in sizes up to 6.25MVA (5,000 kW) resistive/reactive and can be linked to provide capacities up to 60 MW or more. They're designed for easy shipment and can be used to test critical systems and components such as emergency standby/prime power generators, turbines, large UPS systems, ship board generators, large switchgear components, Power Distribution Units, etc.

**Direct Wire and Cable Inc.** . . . . . MF
Eric Laubach, VP
Denver, PA
Direct Wire and Cable is a manufacturer and distributor of portable power cable, welding cable, extension cords, power adapters, cable assemblies with camLok connectors and many other power distribution products. Cables are available in a variety of colors and lengths and are custom printed every foot to your liking.

**Global Heat Transfer** . . . . . MF
Derek Hjorth
Washington, PA
Global Heat Transfer is a leading manufacturer of heat exchangers and industrial cooling systems with 16 locations in 8 countries. GHT offers true world-wide support.

**Integrated Electrical Services** . . . . . CI
Edjuan Bailey, Vice President
Houston, TX
IES is a leading national provider of electrical and communications solutions for the industrial, commercial and residential markets. From power generation to transmission and distribution to end use, IES designs, builds and maintains electrical and communications services for a diverse array of customers, projects and locations.

**Lional M. Duhon** . . . . . AE
Lional Duhon, Power Generation Manager
New Iberia, LA
Build and troubleshoot switchgear, as well as design generator packages and integrate them with control panels or switchgear.

**LMW Consulting** . . . . . AC
Laura Walden, Managing Member
Medford, NJ
Application and design engineering, systems testing, evaluation and analysis, operational procedure development and training, vendor qualification, project budgeting and management for the standby emergency power industry.

**Mainstream Engineering Corporation** . . . . MF
Brandon Scheckel,Military Sales & Marketing Manager
Rockledge, FL
Manufacturer of generators, environmental refrigeration, HVAC, servicing products, research & development, thermal control, energy conversion, power generation.

**Marsh Creek LLC** . . . . . MF
Michael Witham, Service Manager
Anchorage, AK
Marsh Creek LLC is an SBA certified 8(a) ANC company. Its Energy Systems side provides sales and service for products in every segment of the power systems industry. We cover the oilfield, utility, commercial and telecom markets throughout the entire state of Alaska. We manufacture Arctic grade modular power systems in our Anchorage facility. We represent MTU, John Deere, Rolls Royce , EMD, and Eaton PowerWare.

**Meister International LLC** . . . . . DD
Mark Meister, President
Ross, OH
U.S. stocking distributor of porcelain insulators and bushings used by switchgear, transformer, generator and bus-duet manufacturers, packagers and service companies.

**Mena Electric** . . . . . DD
George Humphries, Owner
Mena, AK

**Multi-Wing America** . . . . . MF
Jerry Harris, Vice President of Marketing
Middlefield, OH
Multi-Wing is North America's leading supplier of high-performance axial flow fan blades, producing more than 500,000 units annually. As an ISO 9001-2008 certified company, the Ohio firm uses the most advanced impeller technology in the world, specializi

**Orchid Monroe, LLC** . . . . . MF
Steve Meier, Controller
Hartland, WI
Metal stamper and die cast operation.

**Pacific Power Service Corporation** . . . . . CI
Gary Andrews, Vice President
Fairfield, CA
Serving the power generation market since 1987 providing installation, rental, and service of power generation both prime site and emergency standby. Additional services include sales and installation of catalyst filters to reduce emissions both diesel and gaseous engines.

**Park Power Technologies** . . . . . AE
Richard Park, Owner
Endwell, NY
Twenty years as a service technician for New York State Dept. of Transportation salvaging, repairing and maintaining gensets accessed from federal overstock programs. Units gathered from all over the world 5-500kW. Service and repair gensets and transfer switches.

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**EGSA Job Bank Guidelines**

EGSA will advertise (free of charge) EGSA Member company job openings in the Job Bank. **Free use of the Job Bank is strictly limited to companies advertising for positions available within their own firms. Companies who are not members of EGSA and third-party employment service firms who service our industry may utilize the Job Bank for a $300 fee.** Blind box ads using the EGSA Job Bank address are available upon request; company logos may be included for an additional fee. EGSA reserves the right to refuse any advertisement it deems inappropriate to the publication. Please send your classified ad (limited to about 50 words) to: EGSA Job Bank, 1650 S. Dixie Hwy, Suite 400, Boca Raton, FL 33432. Or, send it via e-mail it to: *J.Kellough@EGSA.org*

**Seeking Generator Technicians?**

Always ask for EGSA Certified Generator Systems Technicians! EGSA Certification demonstrates that the Technician has the necessary knowledge and expertise to service today's complex—and expensive—On-Site Power Generating Systems and Equipment.

**Diesel Emissions Test Manager**

Diesel Emissions Test Manager to provide leadership and oversight to our state-of-the-art diesel emissions test facility. Degree in Emissions or related with 10+years of diesel emissions testing, to include supervisory experience and the build-out of a new test facility. Expertise in EPA, CARB and ISO diesel standards/filings. Manage design team in ensuring consistent/accurate PM, CO, THC, NO, NO2 and other measurements of exhaust emissions/engine performance. Develop module and system level verification/validation test plans. Design, develop and implement enhanced test equipment, systems, processes. Detail-oriented self-starter/team player with excellent communications, organizational, people management skills. Fast-paced, small team environment. *www.rypos.com*. Apply to *emissionsmgr0110@rypos.com*. No 3rd parties.

**Outside Generator Sales Representative**

TAW® is seeking an experienced Outside Generator Sales Representative in Pompano Beach, FL. TAW sells Kohler generators in FL & S. GA. Will sell & prepare quotes for generator maintenance & service contracts to new & existing clients. Base & commission with exceptional benefits package. Email resume to *ellen.donegan@tawinc.com* or fax 813-217-8076. DFWP.AA/EOE. *www.tawinc.com*

**BRANCH MANAGER**

Industrial equipment distributor and service company seeks manager for Richmond, VA. Job includes managing service and parts departments, and branch sales and profitability. Service Management experience required. Degree preferred. Competitive salary, bonus, 401K, health, vacation, and car. E-mail your resume to *tom.mountjoy@baydiesel.com*.

**Generator Set Sales/Service**

Experienced sales/service engineer needed by southern California company to sell engine generator sets.
Please respond to *J.Kellough@EGSA.org*
(Reference PLND06JB-1).

# NEW EGSA MEMBERS

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**Portable Power & ITS Inc.** . . . . . DD
Bob Rhyne, President
Denver, NC
Portable Power sells, rents, services, installs and leases all types of generators and power distribution equipment. We sell the following lines: Terex, Doosan, Eaton, Gillette, HiPower, Mitsubishi, Briggs & Stratton, Lynx, CEP and Gen-Tran.

**Professional Electrical Apparatus Recyclers League (PEARL)** . . . . . AB
Mark Stone, Manager
Aurora, CO
Non-profit trade association consisting of buyers and sellers of new and used surplus electrical apparatus, as well as those who sell products and services to PEARL members.

**ROMAC** . . . . . MF
David Rosenfield, President
Commerce, CA
Manufacturer and dealer of low and medium voltage switchgear, motors, motor controls, transfer switches, generator controls and components. Member of NEMA, NFPA, IAEI, AFE, PEARL, NETA.

**Tennessee Armature and Electric, LLC** . . . . CI
Ron Collins, President
Knoxville, TN
TAE was established in 1913, with the primary business of industrial electric motor repair. We have 45 employees, which include 10 service trucks staffed with journeymen electricians. Their services include equipment trouble diagnostics, programming, preventive and predictive maintenance. We have been servicing standby generators for over 40 years.

**Texas Marine Genset & Power Electronics** . CI
Brent Pepper, CEO
Mason, TX
A full service repair company for legally required emergency standby power generators and automatic transfer switches. Covering central/west Texas. We provide upgrades/new systems and repairs to existing sites. Full load banking services provided.

**The Generator Connection** . . . . . DD
Ryan Noyes, Assistant Manager
Barrington, NH
We are a full service residential and commercial standby & portable generator company. We currently sell only Winco generators with Honda GX engines for residential buyers and Winco and Caterpillar large commercial generators.

**Weld Power Service Co Inc.** . . . . . DD
Timothy Geary, President
Auburn, MA
We are a dealer for Kohler, Onan and Baldor Generators as well as ASCO transfer switches. We service all types of generators and transfer switches. We also rent units to our customers and provide load bank testing.

**Willibrord Lösing Filtertechnik e.k.** . . . . . MF
Klaus Andre, General Manager
Hattingen, Germany
Manufacturer of oil, air, fuel and hydraulic filters for mobile and stationary applications. Manufacturing filters since 1982, the company is DINEN ISO 9001 certified.

## New Student & Retiree Members

**Callahan** . . . . . AF
Michael Callahan, Student
Lindsay, ON Canada

**Cobb** . . . . . AR
William Cobb, Retiree
Davidson, NC

**Costa** . . . . . AF
John Costa, Student
Lodi, CA

**Courtney** . . . . . AR
David Courtney, Retiree
Moore Haven, FL

**Dinesen** . . . . . AF
Terrence Dinesen, Student
Peterborough, ON Canada

**Ferguson** . . . . . AF
Neil Ferguson, Student
Peterborough, ON Canada

**Frye** . . . . . AF
Donnie Frye, Student
Klamath Falls, OR

**Gillis** . . . . . AF
Daniel Gillis, Student
Cobourg, ON Canada

**Griffin** . . . . . AF
Jeremy Griffin, Student
Newmarket, ON Canada

**Harvey** . . . . . AF
Iain Harvey, Student
Pickering, ON Canada

**Hilts** . . . . . AF
Matthew Hilts, Student
Bowmanville, ON Canada

**Hobson** . . . . . AF
Doug Hobson, Student
Fraserville, ON Canada

**Jackson** . . . . . AF
Andrew Jackson, Student
Fraserville, ON Canada

**Langford** . . . . . AF
Craig Langford, Jr., Student
La Mesa, CA

**Nisbet** . . . . . AF
Justin Nisbet, Student
Big Rapids, MI

**Noffke** . . . . . AF
Arnold Noffke, Student
Apsley, ON Canada

**O'Connor** . . . . . AF
Patrick O'Connor, Student
Sunderland, ON Canada

**Ott** . . . . . AF
Jeffery Ott, Student
Cameron, ON Canada

**Pollock** . . . . . AF
John Pollock, Student
Peterborough, ON Canada

**Rhode** . . . . . AF
Dan Rhode, Student
North Branch, MI

**Richard** . . . . . AF
Danielle Richard, Student
Peterborough, ON Canada

**Scott** . . . . . AF
Michael Scott, Student
Pickering, ON Canada

**Semlitch** . . . . . AF
Brian Semlitch, Student
Cobourg, ON Canada

**Seymour** . . . . . AF
John Seymour, Student
Peterborough, ON Canada

**Sheehey** . . . . . AF
Brian Sheehey, Student
Omemee, ON Canada

**St. Jean** . . . . . AF
Tyler St. Jean, Student
Pickering, ON Canada

**Warren** . . . . . AF
Greg Warren, Student
Knoxville, TN

**Watson** . . . . . AF
Ian Watson, Student
Fenelon Falls, ON Canada

**Zapp** . . . . . AF
Brian Zapp, Student
Oro-Medonite Township, ON Canada

# Standby for Big Power

Every Baldor generator set, standard or custom, is designed and engineered to meet the individual needs of your application. Whether it's a 2,000 kW genset to keep your industrial facility up and running, or a 30 kW generator for your remote agricultural needs, Baldor has the right products to meet your need.

Engineered to the highest performance standards and built with unmatched quality, Baldor gensets give you the power you need, when you want it.

BALDOR®
GENERATORS

**baldor.com**

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# ASCO invites you to compare power switching and controls SERVICE

## Ten critical questions will help you compare service providers

Three of the questions are:*
1. What exactly will you do to maintain my critical equipment?
2. Are your techs trained and equipped to comply with safety standards?
3. What spare parts do you carry for my equipment?

Compare ASCO's nationwide network of 100+ highly trained, factory direct technicians. Full time. Fully equipped. Located coast to coast to respond to your emergencies faster. They partner with 450+ Emerson Electrical Reliability Services technicians to offer unparalleled on-site critical power service.

Compare Service. Prefer ASCO.

**ASCO Power Switching & Controls**
**Just another reason why Emerson Network Power is the global leader in enabling Business-Critical Continuity.™**

ASCO®

## ASCO Services provides

- Regular maintenance
- Emergency site support 24/7
- Modifications and upgrades
- Start up and commissioning
- EGSA-certified technicians

ascopower.com, (800) 800-ASCO
ascoapu.com

*See "10 Service Questions" at www.ascoapu.com. Register, then click the Articles tab.

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